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THE
CINCINNATI
MEDICAL NEWS.

EDITED BY

J. A. THACKER, A. M., M. D.

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CINCINNATI, OHIO:

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STORAGE



BELLEVUE HOSPITAL MEDICAL COLLEGE

CITY OF NEW YORK.

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ORIGINAL CONTRIBUTIONS.

The Use of Caustics in Dermatological Practice, with Special Reference to the Treatment of New Growths.

BY I. EDMONDSON ATKINSON, M. D.,

Clinical Professor of Dermatology in the Medical School, University of
Maryland. Read before the Medical and Chirurgical Faculty
of the State of Maryland.

THE very important part played by cauterizing agents in the treatment of diseases of the skin, will justify, I hope, the effort I propose to make in this paper, to present, as briefly and concisely as I can, the circumstances under which this class of remedies becomes useful, more especially in the new formations, and to indicate the choice to be made in selecting appropriate caustics.

There have been, and are, considerable differences of opinion concerning the real value of escharotics; some writers upon the one hand lauding them as superior to the use of the knife, while others regard them as, at best, but little more than adjuvants to more effectual procedures for extirpation. There can be no doubt, however, that neither of these views is correct, but that the truth is to be found, as is usual, in the middle course; for circumstances render now one, now the other, method preferable, in proportion as the parts to be operated upon are superficial or deep, extensive or restricted, irregularly disposed or circumscribed. Where the morbid tissue is well defined; where the destruction of a certain amount of normal structure will be of little or no consequence; where the cicatrix will not offend by the resulting deformity, there can be but little doubt that the knife will

prove the most effective agent. But it happens that the cutaneous affections, for the removal of which the methods in question are most often employed, are, in the great majority of cases, situated upon the face, the integrity of whose features must always be a subject of much care, both to patient and physician. Moreover, certain of the diseases in question are apt to invade tissues irregularly, leaving between their deposits intervening tracts of healthy surface, whose destruction is not desirable, nay, whose preservation is essential; again, the disorder may be so small and superficial that a desire to avoid the use of the knife is natural; finally, the lesion may be one where the knife is not available.

It is hardly worth while to discuss here whether recurrence is more often observed where one or the other method may have been followed; for since the question can not concern any specific process beyond the mere matter of complete removal, it is needless to say that definite conclusions have not been reached.

The present article, then, is not intended to laud the action of caustics as superior or equal to that of the scalpel under all circumstances in these diseases, but only to indicate, in a measure, the conditions under which they should be employed in preference to all other means, or as accessory to these, the selection of the particular caustic for the given purpose, and, in a word, to assist in rescuing from the hands of ignorant quacks and pretenders such precious remedies; for it can not be denied that in this country, at least, they have been abandoned to a large extent to such persons, whose ignorant and indiscriminate uses of them have tended to bring them into further disrepute.

Caustics or escharotics are remedies that act by destroying the life of the part with which they are brought into contact, forming a slough which becomes separated from the subjacent living tissues. They effect this result either by dynamical or chemical action. In the former case it is by primarily destroying the life of the tissue, the disorganization and slough forming secondarily. In the latter event they act by appropriating from the structures certain elements for which they have most powerful affinities, and by their combinations with these effecting disorganization. The very great majority of caustics act thus. Caustics may again be divided into the actual

cautery and the potential caustics. The former term is more definitely used in the application of metallic substances heated to a red or white heat by simple exposure to flame. It is also properly applied where the necessary degree of temperature has been obtained by the action of the electric current or of incandescent gases upon certain metals. The active agent in either case is the heat developed; the methods employed are simply means of attaining the same end, and in their use one should be governed in his selection by the advantages one enjoys over the other *only* in the convenience with which it may be applied. The potential caustics, acting through their inherent affinity for certain elements of the tissues or through an influence exerted directly upon their vitality, are so numerous that their description and an analysis of their comparative values would far exceed the limits of this paper. I, therefore, propose to restrict my efforts to a brief presentation of those of them most useful in cutaneous surgery and of some of the circumstances under which they are applicable.

The actual cautery has, in the affections we are considering, a wide range of usefulness. It has been employed with benefit in carcinoma, lupus, malignant pustule, chancre, phagedena, vascular nævus, etc. The advantages claimed for it are, that it is quick in its operation, that when used at a white heat it is really less painful than any other caustic, and that its action ceases as soon as the heat is withdrawn. The resulting scar, moreover, is usually soft, more pliable and less unsightly than when produced by the stronger potential caustics. It is especially indicated in the treatment of phagedena. The extensive, obstinate and penetrating ulceration often accompanying violent bubo may be very promptly arrested in this way. The success obtained by many surgeons in treating lupus vulgaris and epithelioma with the actual cautery has been most flattering. In such cases it is often best to spoon out with the dermal curette as much of the infiltrating new growth as possible, and then to apply the cautery. This plan has been followed by Piffard in treating lupus with better results than by any other method. My own impression, however, is that these cases are not best suited to this treatment. In epithelioma I certainly have not obtained as good results by it as by other methods. With the actual cautery we are never able to

tell when a sufficient destruction of tissue has taken place unless the limits of disease have been far exceeded. There is nothing to indicate accurately that the incandescent metal has done its required work. It is true, we can stop its action at will and thus secure an advantage of the greatest importance over those who use the stronger potential caustics in similar cases. In cutaneous surgery, therefore, the actual cautery is of great value in all cases requiring destruction of tissue, especially those where the activity of the morbid action requires a prompt arrest, such as phagedena, malignant pustule, etc., conditions where it is necessary to exceed the limits of present disease. In all cases it is probably superior to the stronger potential caustics whose action can not be controlled, but which continue their disorganizing progress until the characteristic chemical changes have been brought to an end by combination with the elements of the tissues or by artificial interference more or less ineffectual. Except for special conditions, thermo-cautery is to be preferred. The convenience and handiness of the "thermo-cautere" of Paquelin are such that it may reasonably be hoped that, through it, a means of treatment, that, from the difficulties of its application, had nearly fallen into disuse, will again become popular.

Where the potential caustics are to be used (and the indications for them are the same as for the actual cautery) there is a large list from which to choose. More prominently may be mentioned caustic potash, zinc chloride, nitric, sulphuric, chromic, carbolic acids, arsenic, silver nitrate, etc. For general escharotic purposes none can exceed in efficacy the caustic potash. It, however, acts upon healthy tissues as freely as upon morbid parts and should not be used over extended surfaces. Where the part to be operated upon is of limited extent, as a small epithelioma or a lupus patch, or where an active caustic is imperatively demanded, it may be employed with advantage, pure or as the well-known Vienna paste, made of equal parts of caustic potash and quick lime, worked into a paste with alcohol. The scar resulting from potash cauterization is apt to be very white and dense, and, consequently, unsightly. The same objections hold regarding nitric and sulphuric acids. Many surgeons use preferably the zinc chloride, either in powder, as paste (Cauquoin's Landolfis', etc.), or as "arrows" made

after the manner of Maisonneure, Kobner and others, to be thrust into the morbid deposit. Although the zinc chloride is preferred by Billroth to all caustics, and although its value in general surgery is incontestable, it is nevertheless open to the same objection as caustic potash, inasmuch as it destroys both morbid and healthy tissues, acting, however, less energetically upon the latter.

Were we restricted in our selection of caustic agents to such preparations as those just enumerated, it is very easily understood why they should have been employed only in cases where the scalpel could not be used, or else to assure the complete destruction of all morbid particles that the knife might not have reached. The surgeon's eye and touch are incomparably finer diagnosticians than are all devouring caustic and will always, under ordinary circumstances, be preferred to such. But the special object of this paper is to direct attention to the valuable agents experience has placed at our disposal, agents whose fortunate quality is to discriminate between the more lowly organized constituents of the new growth and the stable and resistant tissues of health, to attack and destroy the one, leaving the other in its integrity. How desirable are such agents in combating the scattered and irregularly distributed deposits of lupus and epithelioma, maladies whose almost constant tendency is to invade the face, often leaving islands and bands and prolongations of healthy tissues in their midst, tissues most precious if we would preserve features from hopeless and shocking deformity, and which the cutting instrument can not spare, though directed by the most skillful hand.

But it may be asked, can these remedies be relied upon to produce the same results as the scalpel. Can they destroy the new growths so that permanent cure may be attained? The answer is, they can do this with as much certainty as can be attained; for it must not be forgotten that one has here to deal with affections that very often baffle surgical art, however exercised, recurring and progressing in spite of all efforts to check them.

Naturally, success may be expected more confidently where the morbid process has invaded the skin in more limited areas of superficial extent. As the deeper parts become invaded the disease becomes more unmanageable, and, in cancer, the implication of the neighboring glands renders the use of all remedies hopeless. Many

cases of lupus and epithelioma present such arrangements of their infiltrations, nodules and ulcerations, that the milder caustics are indicated; and under these conditions they may be used, with, often, the most astonishingly favorable results. The list might be made quite extensive, but I propose to limit my efforts to-day to the consideration of those only whose action may be considered most satisfactory.

The anhydrous zinc sulphate was recommended by the late Professor James Y. Simpson, either in powder, ointment or paste. Thus used it will not destroy tissue protected by a healthy epidermis, and consequently should be classed with the milder caustics we are considering. Stephen Smith (*N. Y. Med. Record*) has recently given it his endorsement. According to this author, the pain during its application is not excessive. Three or four hours are required for its full action.

But the two most valuable articles of this in our possession, by far, are the lunar caustic and arsenical paste, and for the most efficacious methods of using them, we are indebted, more than to any other man, to the great Hebra. The stick of lunar caustic possesses such feeble escharotic properties that its use has been discounted and denounced as almost without value. One may, indeed, bore and poke at healthy tissues with it and make almost no impression upon them; not so, however, with the crumbly infiltrations of lupus and cancer. Here the pointed pencil sinks with but little resistance into the morbid mass, and only meets with an obstacle when it impinges upon the subjacent healthy tissues. It matters not what structure the new growth has invaded; if bone, it melts into the same pultaceous mass as if in the softer tissues—thus the limits of neoplasm may be so sharply discerned by the pencil that when the operation is completed there will be left the normal parts undisturbed, the morbid parts changed into a discolored, disorganized pulp. The pain attending this operation is severe, and continues for an hour or two, so that it is usually proper to administer an anæsthetic during the operation. The resulting cicatrix is small and pliable, since only the infiltrating material has been destroyed. A very effective method of using the silver is to do so after spooning out the mass as thoroughly as practicable with the dermal

curette, as referred to when speaking of the actual cautery.

Arsenic has long enjoyed a reputation as a caustic, but it has fallen into disrepute on account of the dangers of systemic poison from absorption. Indeed, fears of this are not altogether ungrounded and should prevent the application of arsenical caustics to very extensive or to freshly granulating surfaces. But for the destruction of small areas of lupus vulgaris or of epithelioma it may be prepared in such combination as to secure perfectly the wished-for result without any peril of systemic poisoning. The latter object has called forth preparations of arsenic in various pastes, such as Marsden's Mucilage, composed of equal parts of arsenious acid and powdered gum acacia made into a paste with a few drops of water, Dupuytren's paste of arsenic and calomel, and others. But above all other arsenical pastes must be esteemed the one of Frere Cosme, as modified by Hebra, and used by him and others with uniformly safe results in several thousands of instances (Hebra, *Dis. of Skin*, N. Syd. Soc. Trans., vol. 4, p. 104). This modified formula is as follows, viz.: Arsenious Acid, ten grains; Red Sulphuret of Mercury (Cinnabar), a half drachm; Cold Cream, a half ounce. The arsenic is here present in such quantity only as will create a sufficiently violent irritation of the skin to destroy its vitality, but not in amount great enough to make the absorption of a poisonous dose possible. This paste should continue in contact with the morbid part for three or four days, with daily renewals in accordance with explicit directions, which Hebra has been at pains to give in full. At the end of the requisite time the new growth will have been converted into a brownish slough, while the healthy tissues, though inflamed and swollen, remain entire. The pain, which will be severe during the late stages of the application, should be controlled by anodynes, while under poulticing the irritation will shortly subside and the slough be thrown off. The smallest possible scar will result. The procedure may require to be repeated several times, until the new growth ceases to reappear. Hebra advises that the paste should not be applied, at one time, to a surface larger than twice the extent of a palm. More recently, Kaposi recommends that the area should not exceed a surface larger than a single palm. With such extensive application of it I have

had no experience, but the testimony of Hebra and Kaposi, and others, whose acquaintance with this method of treatment is the greatest, should certainly inspire confidence. Over smaller surfaces my own experience with it has been most satisfactory.

Lately, pyrogallic acid has been used for the destruction of morbid skin tissue. Jarish and Kaposi have both employed it in treating lupus and epithelioma, but with not constant results. A 10 per cent. ointment of the acid applied in a manner similar to that of using the arsenical paste has had at my hands a very happy influence in removing hypertrophic granulations. That its use should be attended with watchfulness is shown by the fatal result of poisoning, reported by Neisser, in which the ointment had been spread on a very large surface of a patient with chronic universal psoriasis.

The foregoing very imperfect observations upon the use of caustics in dermatology are designed merely to urge the importance of a closer examination of the merits of this treatment than it is generally receiving; to point out that the successes claimed by quacks "without the use of the knife," are not always without foundation in fact; to show that under certain circumstances caustics may be used to greater advantage than any other agent; to indicate some of the caustics, from the use of which the most desirable results may be procured. I have not ventured to enter into detailed descriptions of the methods I have recommended, since they may be more profitably studied in the pages of those authors to whom we owe most of what is known upon these subjects and whose labors have afforded us the most valuable applications of caustic remedies. All that I can offer is the small but gratifying experience I have had: an experience that has convinced me of the great utility of these remedies and has determined me to make more extensive use of them in the future.

On Important Points in Surgery.

BY G. P. HACHENBERG, M.D., AUSTIN, TEXAS.

MR. PRESIDENT:—One of the principal benefits of a medical society, such as I have the honor to appear before on

this occasion, is the knowledge gained by its members in learning each other's experience.

Such is the multiplicity of duties and incidents in the practitioner's career, that he can scarce fail to present to his compeers some subjects of interest based upon his experience.

As I have the honor to be invited to address you on some surgical subject, I propose to give you my experience, not on any one particular subject, but will touch upon different important points in surgery. I shall have little or nothing to say in regard to my successful cases, except where they come in the way to establish some important principle in the practice, but shall principally speak of surgical difficulties and want of success in several of my own capital surgical operations. It would be more gratifying to my vanity to adopt the usual mode of reporting successful cases, but, in doing so, I have my doubts that I would be performing my highest duty; at least, that I would be paying so beneficial a tribute to science or humanity, or present subjects so advantageous for your thoughtful consideration, as I would if I speak somewhat in detail of cases wherein I failed of success.

In regard to the reports of the two classes—the successful and the unsuccessful cases—it is often that the reports of failures of successful operations, with their causes assigned, are of greater interest than many out of that flood of reports of extraordinary cures under which the medical press is teeming.

Let me give you an example. Many years ago, Prof. Eve treated a slave that had traumatic paralysis of the left arm, caused by the fall of a bale of cotton on the left shoulder. He taxed his ingenuity to the utmost to cure his patient; but, in spite of all his efforts, the limb remained paralyzed, and, finally, became so reduced by atrophy, that it stuck to him more like some stick than an arm. Years after, reading the Professor's report of this case, I was called to see a similar case. The patient was an Irishman, and the injury was caused by the fall of a heavy cake of ice on his left shoulder. Before I saw him he had been seen by several physicians; some had diagnosed the case fracture, some partial dislocation, and some considered it a bad sprain. In examining the patient, I was reminded of Prof. Eve's case and his unsuccessful treatment. Believing that I could do the patient

no good, I declined to treat him. After I left, two physicians took charge of the case, and promised the patient a speedy cure. They affected a respect for my diagnosis, but laughed at my prognosis. They treated the case with counter-irritation, nux vomica, strychnine hypodermically, and electricity; but, after a year's trial, they not only failed to bring about the least nervous reaction, but the excitement made matters worse, by inducing a general painful edema of the arm. I surely should have been caught in the same snare had I not read Prof. Eve's report.

The reports of extraordinary cures, if they have not the ring of empiricism, at least carry with them a less positiveness—less science—than many reports of unsuccessful cases, in particular where a *post-mortem* examination is a part of the history. We can not always tell what cured a patient, but can nearly always tell what did not cure him, or what killed him. I once gave a lady four drops of Norwood's tincture of veratrum viride for an incipient puerperal hysteritis, and, owing to some idiosyncrasy, the medicine, for several hours, kept the heart in such a depression as to alarm her friends exceedingly. The siege of depression effectually jugulated the inflammation; at least, we thought so; but had the medicine killed the patient, there would be less speculation what the medicine really effected.

I do not propose to investigate how cures are brought about; but if I was called upon to point out a universal principle that involves the operation of a cure, I would not refer to that classical axiom, *Vis medicatrix naturæ*, that really means nothing, to bring it strictly under the comprehension of medical philosophy; but, in order to cure, we have to induce a decided change of action, local or systemic, as the case may require, and where this is judiciously conducted on the principle that two great pathological actions can not exist in the system at the same time, one of them must succumb. It often matters not what you use to make that change in some instances, only so you do no harm. This is why opposites and likes cure; why heat and cold, acids and alkalies, dry and wet, rest and violent exercise, fasting and hearty meals, may, to the astonishment of some, cause miraculous cures. They do cure, as well as kill.

The imputation that medicine in order to cure must in-

duce a counter-pathological action, is a correct one, and explains why the most active poisons at times prove our best remedial agents.

Before speaking of surgical subjects, permit me to make a few remarks on the surgeon himself. The elements that make up a good surgeon, to judge him from the standpoint of a grave operation, are both numerous and complex. He should have an accurate knowledge of the disease, or nature of the injury he has to contend with. He must not only be able to make a true diagnosis of the case, but make a prognosis that may be relied upon. He should have an accurate knowledge of the anatomy of the parts he is to operate upon, and must know, to a fraction, what surgical strain his patient can bear. He should be physically strong, with firm nerves, or be master of them. In disposition he should be hopeful, cheerful and self-possessed. He should not only be intellectually strong, but should have a mind that is well disciplined and of quick conception. Aside of these acquirements, he should be by nature a surgeon. Colleges may give learning and mental vigor, but it is only nature that can graft genius or exquisite judgment to it, and make the scholar a great and gifted man. I know that the genius himself ignores this psychological doctrine, and makes light of this gift of nature, and calls it the fruit of application. It is true that genius can not be developed without application; but it is likewise true that application alone will not develop genius.

What constitutes the genius of a surgeon? It is an ability to turn his knowledge to the best advantage. This he does fearlessly, with self-confidence, and circumspection. He is kind and gentle, and still has nerve to enforce measures to meet a dire necessity. He is ready, neat, methodic, and skillful in his work, and every operation he performs carries with it the stamp of ingenuity. He is not only highly artistic, and a mechanic of the first order, but a ready inventor within the whole range of natural philosophy. "It is the prerogative of genius," says an eminent philosopher, "to produce novel impressions from familiar objects"—"it finds its own road, and carries its own lamp."

In my practice in Philadelphia, I repeatedly observed the work of two of the greatest surgeons of America—Pancoast and Gross. Pancoast is, perhaps, the most

skillful surgeon of this country, and Gross the most learned surgeon and pathologist of the age. Pancoast, in every sense, is a surgeon by nature, with a genius that soars high above all book knowledge and collegiate training. Nature has lavished her gifts on Gross, too, but they hardly exceed his colossal surgical scholarship. If I were the subject of an important surgical operation, my impulse would be first to consult Gross, but afterward resort to Pancoast for the operation. In case of a relapse, however, I go to Gross for operating.

To illustrate the characters of these two great surgeons, let me give you an incident that occurred in Pancoast's practice.

He was called, unexpectedly and unprovided with surgical instruments, to see a gentleman on the highway with compound fracture of the arm. As he approached the patient, he, at a glance, surveyed the nature of the injury, and the first thing he took hold of was one of the patient's boots. The patient cried: "Doctor, it is not my leg that is hurt, but my arm." The Doctor, not heeding his remark, pulled off the boot, and at once proceeded to cut the leg of the boot away, and improvised a set of splints. For the linen dressing he tore the sleeves away from his shirt, and to secure the leather splints, even the patient's hat-band and his ribbon watch-guard were brought into requisition. Had Prof. Gross been called to the case, cutting up the poor man's boots and tearing his clothes from his back for surgical dressing, would have been the last idea that would have entered his learned head. Pancoast is a great surgical inventor, and will improvise his instruments almost out of anything that will cut or saw, if necessity compels him to do so, while Gross, who reigns only in majestic surgery, would hardly think of treating any case without some exquisite tool made by Tiemann or some other of his ilk.

Surgery being based on mechanics, and, as there are some men that never could become expert mechanics, particularly in the more delicate and complicated work of this department, it follows there are men that can never become skillful operative surgeons, however full and accurate their knowledge of the human body and its diseases may be. Place a small lady's watch in the hands of an oculist, and let him take out, one by one, all its

works, and the natural skill he will manifest in this task he will show in a delicate operation on the eye.

A shrewd lawyer, who was in the habit of judging everything and everybody for himself—who well understood the point in question—was anxious to secure the service of a skillful surgeon to perform an operation on his little daughter for hare-lip, and, if possible, have the operation so performed as to leave the least deformity. In his first interview with the surgeon, who was a stranger to him, he asked him to take a pencil and paper and describe successively a square, a circle, and a triangle; “then, if you please, thread this needle,” laying down a very fine needle and some coarse sewing thread. The surgeon at first was indignant at such cool impertinence; but as a Blackstone equanimity is not easily disturbed by any ebullition of this sort, he repeated the request, stating that he desired an exhibition of his surgical skill, and that he would pay him for his trouble. The surgeon, with a smile that indicated either amusement or mischief, took up the pencil, and on a sheet of paper, in quick succession, drew a perfect square, a circle, and a triangle; then he took the thread, separated the strands, and slipped the end of one in the eye of the needle with the first effort.

“Bravo!” cried the lawyer; “a pretty good geometrical surgical eye, and you met the emergency well in threading the needle. I am satisfied. What is your fee?”

The surgeon coolly replied, “\$5 for making a square, \$5 for a circle, \$5 for a triangle, and \$5 for threading a needle.”

The lawyer paid the fee, and, at the same time, engaged the surgeon to perform the surgical operation on his daughter, which was done in a most satisfactory manner.

In speaking of my case of traumatic paralysis. I made the remark that I declined to treat the case. In this I did justify myself. If I had thought there was one chance out of a thousand in favor of the cure, I would have deemed myself morally bound to accept him as a patient. This leads me to consider a principle that should govern the surgeon in treating capital and dangerous cases. He is often called upon to perform operations where there is but a small chance of the patient's recovery, and the damaging effect that such cases often have on his practice, where they terminate unfavorably, tempt him

to avoid them. We all know that where he gets one mark of merit from the public for a clever act, he may get a hundred of condemnation for a mishap for which he may not be responsible. His successful operations are a matter of course, but should an unsuccessful operation bring him under the ban of censure, it is never forgotten, even by the weakest of memories. This state of affairs has its bad effect, both on the surgeon and the public. The surgeon grows timid with his risks and may avoid them, to the detriment of his honor and the loss of many lives. It is a remarkable fact, the longer the surgeon practices his profession the less he is inclined to perform capital operations that are apt to terminate unfavorably. There was a period in Mott's practice when he operated on the *arteria innominata* many times—every operation terminating in the death of the patient. Such formidable operations he seldom attempted in the latter years of his practice.

And, by the way, were these operations justifiable? They were, in the master hand of Mott and at the time they were performed. For he solved the question whether such an operation should ever be attempted. Had he saved but one patient, then tying the *arteria innominata* would be an operation every surgeon should know how to perform.

Baron H. Larrey, in the wars of Napoleon the First, amputated at the hip-joint seven times and saved but one patient. Pott, Lawrence, Sir Charles Bell, and other distinguished surgeons, repudiated the operation, but not on grounds that will bear the test of duty and humanity. The operation finally became one of the established operations in surgery, and such would have been the history of Mott's operation, if he, like Baron Larrey, saved the life of but one patient.

One of my preceptors, a noted surgeon, had two terrible mishaps in his practice. One was in operating for strangulated hernia; he cut into the gut, and saved his patient with the miseries of an artificial anus. The other case was that of an interesting little girl that had some foreign body lodged within the *æso-phagus*. In the attempt of removing it with a hook, the hook was firmly grasped by a spasmodic action of the *æso-phagus*. This unexpected event so disconcerted the doctor that he lost all presence of mind, and, instead of overcoming the spasmodic action

by a little time and tact, he disengaged it with a violent jerk, lacerating the œsophagus and some large blood vessels, causing the death of the little patient before she was removed from the operating-table.

These unhappy cases subsequently greatly impaired the usefulness of this skillful and sensitive surgeon. The public severely censured him for two, the only surgical mistakes he perhaps ever made, and, as he was the only established surgeon in his part of the State, many afterward had occasion to regret it, as he would no longer assume the risks of formidable operations. The doctor did wrong to assume this position, which I think is not tenable for a capable, conscientious, and skillful surgeon. The fact is the surgeon is in duty bound to run any risk with his patient, where there is but the smallest chance of saving or prolonging life. Where the patient is in that condition that it is certain death without the operation and a probable recovery by an operation, although the chances may be one against a thousand, the brave and humane surgeon has a duty before him from which he will not swerve.

For myself I practice what I teach, and, perhaps, owing to it, I have been called upon to perform some of the most formidable operations in surgery. But to protect myself against an unjust criticism I perform no capital operation without the counsel and the co-operation of a Medical Board. Sustained with good reasons for operating, I never yet failed to secure the unanimous consent of an intelligent Board of physicians to perform an operation, and to have them share with me the responsibility of the case. Without this unanimous co-operation, where the surgical operation is one of great risk, the surgeon had better decline performing it. Like a legal jury, such a Board should close its counsel with an unanimous understanding; and the man that stems the opinion of the majority, and perhaps afterward assists in the operation, is entitled to our commiseration; for, depend upon it, he is likely to become the oracle of a damaging censure on the surgeon should he fail to save his patient; but, should the patient recover, he will not hesitate to come under the glory of the operation! Pursuing this course, an unjust criticism can not reach the surgeon; for if he serves the Board, and the Board the patient, and

the patient dies, and everybody is to be blamed, it is nobody's business to find fault.

It is a great misfortune for a surgeon to lose his presence of mind in an operation. He should studiously guard himself against a mishap of this kind, which may not only compromise his reputation as a surgeon, but even the life of the patient. Be ever ready to meet any emergency that may present itself. If you are, the most miserable of embarrassments is not likely to take place. However, if it should occur, either in medical or surgical practice, it is a good rule not to act at all, rather than to act when you don't know what you are about.

I have had a little experience in this matter, enough to guard against it in the future. Many years ago I gave special attention in operating for the radical cure of hernia—a method of my own for which Gross gave me credit in the first editions of his work on surgery. One peculiarity of that operation was to invaginate an ivory ball within the inguinal canal, which was held in its place by a cord passing through the walls of the abdomen and retained from the outside by a perforated pad, with a small winch or windlass on the outside to receive the cord. The ball was retained until a general adhesive inflammation closed up the canal. After this was effected the ball was removed. I think it was my third case I was not able to extract the ball. Instead of leaving the ball to work its own way out, which would have occurred, I nervously took up a scalpel and cut the ball out. In this operation the hemorrhage was frightful, as the operation for the radical cure had brought about a high vascular organization of the parts. The patient recovered, with a radical cure of the hernia; but for want of presence of mind I subjected the patient to a painful and dangerous operation.

After the close of the late war I held the surgency of a medical institution in the city of New York, and one of my capital cases was the extirpation of a uterine tumor that weighed twenty-five pounds—an operation I performed in the presence of several surgeons. I commenced the operation for ovarian tumor. Made my incision from the umbilicus to the symphysis pubis, exposed the tumor, and proceeded to enforce paracentesis. But instead of the appearance of serum we had the flow of blood. Owing to the size of the tumor the wound gaped fearfully, and

there was no possibility to recede with the operation. We had no alternative but to go through with it. In fact a terrible crisis presented itself—indeed, some of my assistants had lost their presence of mind to such a degree as to impair their services in the operation. An army surgeon who was present and had seen considerable service advised me to lay open the tumor with a scalpel. I replied, "If I comply with your advice I will lose my patient in the operation." I took a scalpel and quickly extended my incision to the ensiform cartilage, tore away the adhesions and turned out the ponderous mass, and then removed it from the pedicle with the ecraseur. Not much blood was lost; still the reaction was imperfect, and I lost my patient in a few days.

The tumor was presented to the Pathological Society of the city of New York, who appointed the eminent and learned surgeon and pathologist, Krackowizer, to make a report on the nature of this extraordinary tumor. He did so, and unkindly criticised my error in diagnosis, and in particular found fault that I did not determine the nature of the tumor by the use of the uterine sound. I was not in the city when he made his report; therefore I had no opportunity to explain why, owing to the size and packed nature of the tumor, I was led to think that the uterine sound would be of no service to me in making out a differential diagnosis. The case had been diagnosed ovarian tumor by several of the most distinguished surgeons, and the mistake I made was to allow myself to be too much influenced by such high authorities, which perhaps led me not to make that critical examination I would have made otherwise.

For nearly a year I withheld the report of this case, although I was strongly urged by Prof. Storer, of Boston, and others of New York, to do myself the justice to give it immediate publication. Instead of that I kept a naughty eye on Krackowizer's surgical practice, which, owing to his connection as surgeon-in-chief of the New York City Hospital, was very extensive. Finally a case was brought before this infallible surgeon, who, after carefully using the uterine sound, he, with an able counsel, diagnosed it ovarian tumor. Krackowizer operated, and, after removing the tumor, to his astonishment found it to be a uterine tumor. The patient died, and he gave us a faith-

ful report of the case, but without removing the stricture he placed on my case.

I was now prepared to produce my report, which I did at the Convention of the Columbia County and Berkshire Medical Societies, that meet at Lebanon Springs, N. Y., and afterward, by the request of the editor of the New York *Medical Record*, reported the case for that journal.

This case taught me an important lesson, and that is, make out your own diagnosis, and be not governed by the opinion of any one, unless you are sure he is right. It is not safe in our business to take things for granted; and yet this is the besetting sin of the medical profession. We nearly all are too much inclined to take for granted what we hear in the lecture-room, read in books and medical journals, or what is said by medical men that are prominent by their practice and position.

Let me give you an example how medical men can deceive each other. About twenty-five years ago a highly intelligent physician sent for me, who thought he was almost in a dying condition with biliary calculi. I found him in bed, bolstered up with pillows, and so fearful was he to make the least movement, for fear that a stone might obstruct the *ductus communis choledichus*, and kill him, that he was almost afraid to speak. He gave me a most intelligent history of his case as a disease of stones in the gall-bladder. He was very careful to tell me that he had consulted some three or four medical professors and more than twenty experienced physicians, and they all agreed with him as to the diagnosis of his case. He attempted to make out a diagnosis for me, that was as clear as day and beyond all doubt. As he passed most learnedly through the history of his case I did not once interrupt him. After he had finished he asked me:

"Well, now, what do you think of my case?"

I answered: "Did you ever see any of your gall-stones?"

"Yes, sir; I found them two or three times in my fæces?"

"Of what size, and how many at a time?"

"About the size of a filbert, and about a small handful at a time."

"What did you take to cause their expulsion?"

"A hundred grains of calomel each time. I know when the gall-bladder is full of them by certain hepatic and epigastric symptoms."

In the humor of Mark Twain I asked my learned friend:

"Please tell me how it is possible for a hundred grains of calomel to squeeze out of the gall-bladder a handful of biliary calculi?"

The doctor was quick to see the ridiculousness of such therapeutics and evaded the question. But under a great excitement he said:

"Do you wish to intimate that these stones are not from the gall-bladder? Have you a diagnosis at variance with that of my medical counsellors, many of which stand at the head of the profession? Then what are these stones, and where are they from?"

"These stones are no gall-stones, but intestinal concretions of the duodenum. After they have accumulated, any active cathartic that has a special effect on the duodenum, as calomel has, will expell them. As to the diagnosis of your medical advisers, in the first place, you deceived yourself as to the nature of your disease, and then, with fine tact and intelligence, you deceived them."

Inspissated ox-gall, taraxicum and nux vomica, speedily cured the doctor of a disease that had kept him in a most miserable suspense for years.

In 1860 I amputated at the hip-joint and lost my patient under peculiar circumstances. I so conducted the operation as I thought would lessen the tendency to mortality. It is generally known that the mortality of amputation of the leg increases as we approach the abdomen, and consequently it stands at the highest point in amputation at the hip-joint.

To explain the position I took in this operation I will give you a brief extract of my report of the case published in the Boston *Medical and Surgical Journal*:

"In examining into the statistics of the mortality resulting from amputation at the hip-joint, let us examine, to meet a special purpose, into those of two other formidable operations, namely, excision of the hip-joint and amputation at the thigh.

"In amputation at the hip-joint, according to Roux, 1 in 2 proves fatal.

"In amputation at the thigh, according to Bryant, 1 in 7 proves fatal.

"In excision of the hip-joint, according to Price, 1 in 15 proves fatal.

"We have, then, an average from the two latter operations, 1 in 11 proving fatal. Now, here I conceived the

idea, in order to give my patient the best possible chance for recovery, not to amputate at the hip-joint in any of the usual ways, but to submit him to the double operation of amputation at the thigh, high up, to be immediately followed by that of excision of the hip-joint."

In another place of that report I attempt to account for the great mortality of amputation at the hip joint, not caused either by shock or hemorrhage, by saying:

"We are inclined to connect the causes of this mortality not with the joint, otherwise excision would be as fatal as an amputation, but rather within the integuments of the thigh in its juxtaposition with the abdomen. If this is so, then the *morbi locus* is either confined to the blood-vessels, in the shape of phlebitis, or to the nerves, as neuri-lemmatitis. The close proximity of these affected parts to the spinal and circulatory center of the body is very likely to prove highly injurious, if not fatal. We see, then, the importance in amputating at the great joint to leave sufficient integument of the thigh to keep its reparatory inflammation away from the abdomen and spinal axis."

I will here add, I enforced this extraordinary operation to protect Scarpa's triangle, and place it away from all pathological influences—to lessen the surgical shock and in particular with the view of economizing blood. I will not reproduce the details of the operation, but will simply state how these advantages were secured.

Chloroform was administered; digital compression of the femoral artery resorted to; amputated the thigh at the upper third; to control the stump a wooden handle was thrust into the medullary opening of the femur. The external incision for excision was made; the head dislocated; a watch-spring knife was now slipped over the head of the femur, and with a few tracting movements shaved it out of its bed. A reliable assistant closely followed the knife, and secured every artery with artery forceps the instant they were cut. In this operation less than half a pound of blood was lost, favorable reaction set it, and in a few hours afterward the patient asked for food, was cheerful, and did very well.

In my temporary absence, several hours after the operation, by the patient's own imprudence, he excited a hemorrhage from the stump, though, slight as it was, it was followed by a fatal collapse. When I saw him the

hemorrhage had ceased, and a clot of blood had formed within the flaps. To comply with what is considered good practice I did not disturb this clot. But why could I not bring about reaction the second time? What killed my patient? It was not the loss of blood, and hardly the original shock from the operation. The cause was evidently blended with the hemorrhage. Was it owing to the presence of that clot that caused the same frightful depression we often have immediately following puerperal hemorrhage, with a clot of blood within the uterus? I am now under the impression that I made an error not to remove the clot. Where they are retained with no outlet whatever, they fearfully depress the system, physiologically in the same manner as would a protracted douche.

In a personal interview with Prof. Weber, of the Cleveland Medical College, he thinks that my mode of operating for amputation at the hip-joint is impracticable, except where the upper femur is in a state of necrosis, or otherwise badly diseased. I assured the professor that he was of that opinion because he underrated the efficacy of my flexible knife. Without this instrument I would not attempt this operation under any circumstances, and even in excision of the shoulder-joint I found it an invaluable instrument.

I had an interview with Prof. Gross, a short time after he performed his operation of amputation at the hip joint with success. He thinks that the complication of the operation, and the time it takes to perform it, is an objection to it. I dislike to dissent from the opinion of my old teacher; but if he holds to the opinion, what is almost universally practiced by surgeons, that the quicker an operation is performed the less is the degree of the shock, it is a doctrine that does not hold good in nature. How terrible may be the accidents on a railroad—it may occur in a second and all is over—but how terrible is the shock to almost every one that is injured. And very often there is no difference between the traumatic and surgical shock. Generally it is desirable to do away with a surgical operation, if possible in so many seconds, but if it should take as many minutes, would the constitutional shock be greater? I think not, and I am sure it would be less. Where, at the expense of time, we save the most blood.

Electro-cautery is about to revolutionize the practice

of surgery, and it will yet prove the safest agent for all amputations. Its application in amputation at the hip-joint, where time is no object, should be preceded by tying the femoral artery, then collateral circulation counteracted by putting the leg in a uniform compress. In about ten days or so the leg would be prepared for amputation by the electro-cautery. In this operation there would be comparatively no loss of blood, and the system would be so gradually invaded with this great operation as to cause little or no shock. What would our learned medical fathers say to such a complication? Would they not think it rather *gross* for us to forge a knife out of thunderbolts to do our amputations with?

It has been my experience to perform many operations, in which the peritoneum was involved, and it may be a matter of surprise to those that adhere to the belief that it is always dangerous to cut into the peritoneum, that I never had yet to contend with a fatal case of peritonitis. My experience goes to show that there is something more than a cut necessary to induce fatal peritonitis. It appears that fatal peritonitis only develops itself, first, by the contact of some foreign body to the peritoneum; and, secondly, by a specific vitiated condition of the system, in particular in the puerperal state.

In many fatal cases, where the peritoneum is the seat of the disease, we have another form; but the patient is not destroyed by peritonitis, but by what we may call a peritoneal shock. Allow me to give you a few examples of this form. In the battle of Antietam one of my orderlies was struck on the abdomen with a piece of a shell. I noticed immediately after receiving the injury he was thrown into a great constitutional depression. He turned pale, deathly sick, and large drops of sweat covered his forehead and face. I examined the abdomen and found not the least sign of injury, not even ecchymosis. He died in a few hours.

In my Surgical Institute, in Rochester, N. Y., I had a patient with scirrhus of the stomach. One night the case terminated in perforation. Immediately great constitutional depression followed and the patient died the next day. A *post-mortem* revealed no peritonitis. These cases are numerous, and they show that the serous system holds a very close connection with the nervous system. May not this throw some light on the pathology of such dis-

eases as *coup de soleil*, cardiac metastasis from rheumatism, and other diseases that suddenly and mysteriously destroy life, of which the knife reveals no cause.

However, my last operation on the peritoneum proved fatal, but neither from peritonitis nor from a peritoneal shock. The patient was a country merchant who had ascites, and before I saw him had been tapped several times. Under my treatment I tapped him twice. The dropsy did not appear to be connected with any organic disease of the kidneys, heart, or liver, but was the immediate result of some diseased condition of the peritoneum itself. The patient's own confession was that if it was not for the dropsy he would be as well as ever. The dropsical pressure not only kept the patient in misery, but had a very damaging effect on his general health. After my last tapping I left in the opening a small silver canula, an inch long, to prevent further accumulation of fluid. I enjoined him to remain quiet, to take nutritious food, and ordered a preparation of syrup of iodide of iron, with a little colchicum; and likewise that he should maintain a uniform abdominal compression. For several days he did remarkably well, and at no time did he suffer with abdominal pain. Finally he demurred to what he considered an unnecessary confinement; got up, and playfully told his wife that he was strong and well enough to kick down the walls of his chamber, and at the same time going through the actions, as if he was going to enforce what he thought he could do. That afternoon he felt weak, and sunk into a state of great exhaustion toward night. As the exhaustion gained on him so increased the discharge from the canula. Finally the discharge of the serum became so profuse that it not only saturated his bed, but the fluid ran in a stream from under the bed across the room. This tremendous exosmosis of serum terminated into a fatal collapse. At no time had the patient symptoms of peritonitis. As my patient lived forty miles from my place of practice I had no opportunity to see him in this critical condition, but could I have anticipated the exosmosis I should have attempted to prevent it by the constitutional effect of turpentine, joined with absolute rest. Perhaps rest alone would have sufficed. Rest was enjoined as an important feature of our treatment, not as prophylactic of exosmosis, but of peritoneal inflammation. I think the man died by his own impru-

dence. However, through the influence and efforts of a local Paracelsus Bombastes Furiosa, I got the credit of killing him.

The introduction of the canula into the abdominal cavity, and to leave it so as to drain the serum as fast as it is secreted, is an experiment that has been tried by several surgeons. Of several reports I have seen, where this operation was resorted to, it afforded permanent relief only to one or two cases, and in no instance do I remember that the presence of the tube excited fatal peritonitis.

I have repeatedly administered spirits of turpentine prophylactically to prevent hemorrhages and serous effusions, with fine effect. As prophylactic treatment is a subject of great interest, and not generally appreciated, I will give you a few instances showing its great importance, in particular, in the management of malignant epidemic diseases.

About fifteen years ago I was called upon to render services in a neighborhood in Central Illinois where they had an epidemic of the "black tongue." The physician of the place in one month lost forty cases out of forty-seven. He treated the disease principally with calomel, opium and quinine, and as soon as the hemorrhagic diathesis developed itself the patient was sure to die. All those he saved never bled. The hemorrhage was liable to take place from any part of the mucous membrane. In my cases I enforced an early treatment to preserve the natural constituents of the blood—the fibrin in particular. Therefore I eschewed all mercurials. The turpentine was administered as a prophylactic to prevent that sanious exosmosis that was the harbinger of death. Turpentine, quinine, pyroxilic spirits, ipecac and milk-punch were the principal medicines I brought to bear against this disease. Thanks to turpentine I did not lose a single case.

Immediately after the close of the war there prevailed a disease in Springfield, O., called by the physicians of the place typhoid gastritis. The fatal symptom of the disease was an excessive vomiting, and the mortality of the disease was great. At the time of this epidemic I passed through that city on my way to New York. Spending a short time in the city, one of the principal physicians of the city solicited my counsel in a case of a

young lady where the ominous symptom of vomiting had just been established. The doctor was sorely baffled with the case, and at first I had nothing to suggest to relieve him of his embarrassment. Believing that there was some feature about the disease that was not understood I asked him what diseases prevailed in the city prior to the appearance of this disease. The doctor's answer was not very definite, but the mother of the patient, a very intelligent lady, was present, and remarked that they had in their own family, four weeks before, a case of erysipelas. The doctor remembered the case and several others he had under treatment at the same time. From these and other circumstances I assumed the position that the gastric inflammation was of an erysipelatous nature and should be treated as such. For our patient I recommended muriated tincture of iron, with hydrocyanic acid. The medicine was administered and the first dose checked the vomiting. The medicine was continued as a curative agent, and the patient made a speedy recovery. The doctor afterward informed me that this medicine had the same magical effect in other cases, and, as a prophylactic agent, not only prevented vomiting, but established convalescence in a few days.

It is not often that a surgeon makes a mistake which results in favor of the patient. Such a mistake I once committed in my hospital practice in Nashville, Tenn., in the time of the late war. About three o'clock in the morning one of the surgeons of the U. S. Hospital, No. 1, came to my quarters, asking me to see a surgical patient in his ward that was dying from some mysterious cause. I quickly repaired with the doctor to the bedside of the patient, and found him in a state of insensibility, with a respiration that was interrupted and fearfully slow. Each breath appeared to be his dying breath; still his pulse, and the general vascular respiration, when he did breathe, did not indicate that he was exactly in the throes of death. The pupils were contracted, but the ward-master assured us that the patient had taken no medicine of any kind. I quickly examined the epiglottis, but found no œdema there, but a total absence of tonicity of its ligaments. When he breathed I noticed a marked passiveness of the larynx—so much so that I attributed the cause of the asphyxia to be seated in that organ. With this idea, without further investigating the nature of the case, I hurriedly

demanded surgical instruments and quickly performed tracheotomy. When I took up the knife to operate, respiration had ceased entirely, and my assistants feared that the man was dead. After the opening was made into the trachea, we resorted to artificial respiration, and in less than twenty minutes after the operation, to our surprise, the patient raised his head and with some alarm gazed around him, and asked what had happened to him. After he was out of danger, we made further inquiries in regard to the history of the case, and learned to my disgust that I cut the man's throat for opium-poisoning. It was well for the patient that I did not know this at the time of the operation, for then, with my views of the pathology of opium-poisoning, which are current in the profession, tracheotomy would have been the last remedy I should have thought of in such a case.

This case proves that the immediate cause of death from opium-poisoning is a paralysis of the ligaments of the epiglottis and the laryngeal muscles. For want of a free ingress of air into the lungs, the blood becomes gradually carbonized, producing secondary soporific effects on the brain. The case proves that it would take a very large dose of opium to kill a person where he had a bracheal opening to breathe through.

There are several very interesting features about this case, but the one that I wish to direct your attention to, in particular, is the question of operating on patients that are apparently in a hopeless condition. That thousands of lives are lost for want of courage and a persistent perseverance on the part of the practitioner to snatch the patient out of the very jaws of death, is admitted by all.

I will close with a few examples. A boy had compound fracture of one of his legs, which in a few days ended in general gangrene, with great constitutional depression. I was sent for from the adjoining town as consulting surgeon, and advised immediate amputation in order to save the life of the patient, for the reason that the depression was not from a traumatic cause, but caused by the gangrene itself. I remarked to the attending surgeons, "Remove the cause of the depression and you may be able to bring about reaction, and save your patient." They did not agree with me, but gave me to understand that it would be criminal to perform this operation, which would surely hasten the death of the patient. From such re-

marks, that put us not in a very formal attitude, as I took up my hat to depart, I remarked: "Gentlemen, do as you please, but if he was my patient I would cut his leg off before I left this house, and, by doing so, in all probability save his life—without the operation he will surely die." The father of the boy, who had secreted himself to hear the counsel, heard what was said. After I was gone the father demanded the attending surgeons to amputate the limb, and if they declined he would dismiss them and place the case in my hands. They amputated the limb, favorable reaction followed, and the patient got well.

Sergeant Phillips, of the 1st Virginia regiment, was wounded in a skirmish, the ball passing through the soft parts of the left thigh, entering Scarpa's triangle of the right thigh, fracturing the femur high up. The ball was lost in the wound of the fractured limb. After the injury he fell into the hands of the enemy, and was taken to the hospital and there examined by several surgeons, but, owing to the unfavorable prognosis, no operation was attempted. A few weeks after he was wounded his friends got permission to take him home, which was eighteen miles south of Buckannon, W. Va., having to be carried for the distance of a hundred miles on stretchers. After he was at home a month or two he was taken to a United States military hospital in Wheeling, Va., where for several months he was seen by many different surgeons, who took the same view in regard to operating that was held by the Confederate surgeons who saw him first after he was wounded. He was accordingly discharged from the service and returned home.

In 1863 I went into winter quarters with my regiment in Buckannon, and then was asked by one of his physicians to visit him, with the view of removing the limb by an amputation at the hip-joint. The patient lived within the line of the enemy, but, on account of the extraordinary nature of the case, and believing that I might save the life of a brave soldier, I determined to see him. Accompanied by a guide we reached the place of his residence, where I met his family physician. I found the patient in bed, very much emaciated, with the left thigh enormously distended. There were several fistulous openings scattered over the thigh. The original opening in

Scarpa triangle made by the ball had closed up. He told me that he was wounded nine months before.

After the examination I concluded not to amputate at the hip-joint (the operation so generally recommended by the surgeons that saw him), should an operation be attempted, but made my preparations to make a bold dissection for the extirpation of the ball and the necrosed bones, which were the source of all present mischief.

My assistant put the patient under the influence of chloroform. I made quickly a deep incision, six inches long, from what I supposed to be from the trochanter major down the femur. This cut brought me into a large cavity that was filled with pus and coagulated blood, which I scooped out with my hand. After the cavity was cleaned out I discovered that I missed the line of the femur, for after the fracture the adductors had drawn the fractured ends of the bone into the gluteal region, and there the union of the bone was established. In order to reach the seat of the difficulty I now made a transverse incision, about six inches long, giving me a triangle flap. I had now access to the place where the femur had been broken, and found the ball very much flattened and wedged between the fractured ends. It was partly encased by an osseous formation, and two sharp points of the ball projecting into the soft integuments. I applied the bullet-forceps to the lead to twist it out of its bed, but broke the instrument in the attempt. Another forcep which I had in reserve I used, but that likewise gave way. I found myself now in a fine fix—in the midst of one of the most formidable operations and no suitable instruments to go on with. But before I cast aside the second broken instrument I determined to proceed at once to bring about a surgical fracture of the femur, knowing that the weakest point of the bone is that part that held the ball. I raised up the thigh, placed my left knee as a fulcrum under the seat of the fracture, and with a single firm blow with my right hand on the patient's right knee broke the bone in two. After this with my fingers I picked out the pieces of the ball, which were in two pieces and very much flattened. I likewise removed all the necrosed bones, and cleaned out the wound with great care. The shock of the operation on the patient was terrible, even to the degree of an alarming syncope. We resorted to artificial respiration, and as soon as he was able to swal-

low we gave him stimulants freely. After reaction was established I proceeded with the dressing. I left the patient in the hands of the attending physician, in a very critical condition, in which he continued for weeks, but finally recovered with four inches shortening of the limb. This patient still lives, is a pensioner of the country, performs hard labor on his farm, and gratefully writes to me once a year.

How Many Functions Does the Uterus Perform?

BY JAMES BARNSFATHER, M. D., M. P. S., ENGLAND.

THIS is a question concerning which there is a great diversity of opinion. Some say that the uterus has *two* distinct functions, viz.: menstruation and utero-gestation. Others say it has more functions. Now I think that the uterus is subject to the same law that governs all the other organs of the body, viz.: a oneness of action. Who ever heard of the eye performing any other duty than that of seeing? It does this from the beginning to the end, and nothing else. The ear only hears, the stomach only has one duty to perform; so, also, the lungs, heart, kidneys, bladder, etc. Why, then, should the uterus be made an exception to the general rule? To my mind it is not.

Since I wrote my first article on the microscopical character of the menstrual discharge (*vide* Cincinnati MEDICAL NEWS, March, 1875), and its relation to the mucous membrane of the uterus, I have been frequently asked by medical men the question which heads this article, and I have invariably advocated the theory of the *oneness* of action of the uterus. Let us examine this matter for a few minutes, and we will see how many offices it performs. From birth until puberty the young uterus performs no functions. At puberty the uterus commences its work, which it does without or with pain, in exact ratio to the normal or abnormal condition of the organ. In menstruation the organ enlarges, and the lining membrane is shed, either as debris or in pieces, or sometimes whole (as in membranous dyomenorrhœa), these abnormal conditions being always attended with pain, as the uterus is performing its functions under dif-

ficulties. Moreover, we note that the pains in menstruation come and go, the same as the pains in parturition. We also notice that the ostincae dilates to a greater or less extent during the catamenial period, and gradually returns to its former condition at the cessation of the flow. As a matter of course in parturition we have greater dilatation, and we have the placenta and its attachments thrown off by the contractions of the muscular fibers of the uterus. These fibers perform the same office in the *minor process* of menstruation as in the *major* or parturient process. Yet their office is *one and the same in both processes*. The post-parturient process of involution is also repeated, in a very slight degree, in the menstrual process.

It is a wise provision of nature that each part of the animal economy has a certain duty to perform, which it does at all times with unfailing certainty, *modified only by some lesion*, and then it attempts to perform its part to the best of its ability by trying to overcome any difficulties or obstructions it may meet with. It is quite natural for the muscular fibers of the uterus to contract at the full term of gestation, in order to expel the contents in its cavity. Following the same rule it is quite as natural for the muscular fibres to contract at the minor operation of expelling the degenerated and now useless membrane during the term of menstruation. In the major process we sometimes hear of painless labors, and in the minor process we frequently hear of painless menstruation. In each case we have the membranes thrown off, with the usual muscular contractions, with this exception, that at the major operation we have a more complete and a more developed membrane thrown off. But let some lesion interfere with the normal action of the uterine muscularia and then we will have pain, caused by the extraordinary efforts they make to perform their natural function. We find this in cases of version, flexion and dysmenorrhœa, in all their forms, down to that most agonizing condition called dysmenorrhœa membranacea, where the membrane is thrown off entire, similar to that in pregnancy, although in a less developed condition. In the major operation, *e. g.*, as in the case of abortion, we have more hemorrhage at the next catamenial flow, as the blood-vessels are more enlarged and the separation of the membranes are more complete than

in the menstrual or minor operation, *but the fundamental principle is the same in both processes.*

In these few remarks I have confined myself entirely to the uterus proper, and do not include its attachments and appendages.

Discussion on Insanity.

IN the last issue of the MEDICAL NEWS we published the remarks of R. R. McILVAINE, M. D., in a discussion which followed upon the reading of a paper by Dr. PACKARD, in the *Medico-Legal Society* of New York. At a subsequent meeting an interesting discussion occurred on the reading of a paper by Dr. GEORGE M. BEARD. We give Dr. McILVAINE's remarks—ED.

Dr. R. R. McIlvaine asked the reader of the paper what the proportion of the insane in England and Wales is to the whole population?

Dr. Beard, quoting from Dr. Lewis' presidential address before the Psychological Society, which may be found in the *Journal of Mental Science* for October, 1879, replied that there were 70,823 lunatics in 1878, with a population of 25,000,000.

Dr. McIlvaine desired to know what proportion that gave?

Dr. Beard replied that he had not made that calculation; the information sought may be ascertained by a simple mathematical operation.

Dr. McIlvaine further asked the proportion of insane to the population in the State of New York?

Dr. Beard said he had not the statistics.

Dr. McILVAINE.—The proportion of insane to the population, in 1878, in England and Wales, was one in three hundred and seventy-three; in the State of Massachusetts, one in four hundred and twenty-three; in the State of New York, one in five hundred and eighty-seven; in Illinois, one in eight hundred and sixty-six; in Iowa, one in one thousand one hundred and one; and according to the Fifth General Census of Chili, 1875 (Dr. G. R. Brush, Hygienic and Medical Reports, Vol. IV., Navy Department), one in nine hundred and sixty-two. According to this showing, it will be a long time before the proportion in the States of Iowa and Illinois will be reversed—that the insane will be in the majority.

This question of insanity is always new and always old in a certain sense. On January 5, 1875, the Commis-

sioner in Lunacy for the State of New York published his report for the year 1874. In this report he thought, as he began to read it, that the great problem had been solved, and that he could exclaim, in the language of the immortal Luther, "It was found at last;" but he had pursued his researches but a little way when he found that this was a delusion, and that the real cause of insanity was as obscure now as it was fourteen hundred and fifty-one years before the Christian era, when Moses, in his declaration in Deuteronomy xxviii. 28, threatened the Israelites with a visitation of Egypt, with madness and astonishment of heart, as a sequel to the violation of his laws. The language of the lawgiver is, "The Lord shall smite thee with madness, and blindness, and astonishment of heart." This is the first place in which the word "madness" is found in the old Book. It is not heard of again until 1,062 years before our era, and it may be found in 1st Samuel xxi. 13: "And he changed his behavior before them, and feigned himself mad in their hands, and scrambled on the doors of the gate, and let his spittle fall down upon his beard." David saved himself by feigning madness before the King of Gath. He must have seen and known what were the peculiarities of madmen, as he succeeded in deceiving this distinguished monarch and his associates with his affecting madness and escaped unhurt.

It is true that the commissioner tells us that we have de-demonized insanity. It may be true in his individual case, and in that of the President of the Society, and the speaker and some others; but the great majority of mankind have a latent feeling and belief that there is something supernatural in connection with insanity.

Gentlemen were aware that recently some specific charges were made by a society in this city in relation to the treatment of the insane. As he understood from the documents received, the movers in these reforms had permitted themselves, in the language of the law, to be "non-suited," by reason of the fact that they were not prepared with the data, or if they had them, they were not sufficiently available for purposes of meeting their opponents. Year after year since 1872—the year when so many charges were made concerning the insane—there had been an accumulation of facts in regard to neglect

and what may be termed *imposition* on the insane; and yet they were all passed over!

To turn again to the report of the commissioner: He gives us the details of the insane in each county of the State; he tells us that insanity can go on only after a protracted degeneration of what he calls germs and deteriorated growth. Then he touches upon the expense of these insane paupers; and we are informed that on Blackwell's Island for 1,787 patients, the cost per capita was \$1.46 per week! Now most of the members present reside in the city—many resided here in 1874, the date at which this fact applies—and they were no strangers to the price of living in that age; and if they could imagine and believe that a full-grown man could subsist on one dollar and forty-six cents per week, he had no doubt that they would join him in saying that this was adequate cause in producing madness. This amount would, at that time, hardly purchase a decent lunch; and yet these paupers cost only \$1.46 each a week! It is true that the six hundred and sixty-two patients on Ward's Island received \$1.83 per week, and on Randall's Island they received \$1.52 per week! This, when compared with that aristocratic institution over the way—the Bloomingdale Asylum—where the sum of \$20 is exacted in advance per week, is an astounding exhibit! \$1.46 per week—\$20 per week in advance! And this statement is made without any apology on the part of the commissioner, without any explanation, or protest, or recommendation for the amelioration of their condition!

He had been reflecting upon the claim made by the orator of the evening, that insanity is caused by the activity of the brain of mental workers, and he was astonished that the conclusion is forced upon him that mental workers throughout all ages of the world's history have not been afflicted with insanity. He had gone back in memory as far as the days of Thucydides, who was twelve years the junior of Herodotus, who was born four hundred and eighty-six years before our era. From that day down to the time of Baron Von Humboldt, we do not find that the real intellectual workers ever became insane; and the unduplicated men of the fifteenth century—that century which produced such a galaxy of great men—beginning with Guttenberg in 1408 (the inventor of the art of printing); then passing, to Zemnes, the Archbishop

of Toledo, viceroy of Spain, and author of the Polyglot Bible; next in order, to Columbus, 1435; but time would fail to name those immortal men, of whom Leo X., who became Pope in 1513, was one of the greatest lights; none of these were insane. Then we come down to the days of the American Revolution, in the eighteenth century, and we find that of the fifty-six signers of the Declaration of Independence, the majority lived near the time appointed for manly life—threescore years and ten, and others, in number, surpassed it—and to the time of the French Revolution, which produced so many great men, not only in the army and state, but which did more for science than any other event since the beginning of the Christian era.

Then again, the orator of the evening tells us that the Anglo-Saxons are more addicted than any other race to insanity, while he admitted that he used the term Anglo-Saxon in an imperfect sense. Now, if imperfect, if Anglo-Saxon is a wrong word to use, why use it? Are the people of the United States Angles or Saxons or Jewts? Are the people of New York, in a particular manner, Angles or Saxons or Jewts? He would be glad to receive a reply, and in replying he would begin with the men whose names are inseparable from the glory of the State. The first was Schuyler, who was a Hollander by descent; the second, Herkimer, a German; the third, Jay, a Frenchman; fourth, Livingston, a Scotchman; fifth, Clinton, whose name has become a national name; an Irishman; sixth, Morris, a Welshman; seventh, Hoffman, who was a Swede; eighth, Steuben, a German; next, Alexander Hamilton, who was either Scotch or Irish. These nine names are inseparable from the early history of this State, and neither of them had a drop of Angle or Saxon or Jewts blood in their veins as far as we know. There are four other names, and these together constitute the thirteen immortal names connected with the early history of this State; they are the gentlemen who signed the Declaration of Independence—among others. The first was Wm. Floyd, of Long Island, his father's family was from South Wales; the next was Philip Livingston, a Scotchman; then Francis Lewis, Welsh; then Lewis Morris, a Welshman. Of these four, three are of Welsh extraction, and the other (Livingston) was of Scotch extraction. We also know that the Saxons were conquered

by the Angles, and the Angles gave their name to the island in 825, when Egbert ordered the island to be called Angle's Land—he having conquered the Saxons. These facts every tyro knows to be the truths of history, and he also knows that, taken as a sample, they disprove the assertion that the Saxons furnish the largest quota of the insane.

Dr. McIlvaine said that, at the last meeting of the Society, he took the ground, first, that insanity is not on the increase; and, secondly, that mental workers are not the class who are most subject to insanity.

He was not in the habit of carrying books, but he had with him a slip of a newspaper containing a portion of the report of the Commissioner in Lunacy for the year 1875. In his report he says that "insanity is steadily on the increase, and its ratio is at times in excess of the growth of the population." He attributes insanity to imperfect nutrition; and judging from the fact that on that little continent, known as Blackwell's Island, where the rate of cost *per capita* is \$1.46 per week, he (Dr. McIlvaine) had no doubt but that this is a very potent cause! Finally, he attributes insanity and its growth to imperfect nutrition, breathing a vitiated atmosphere, abuse of alcoholic stimulants, and more disastrously than all, to the indulgence of the lower passions.

Dr. McIlvaine would like to know whether it is true that contaminated atmosphere caused insanity. It had been demonstrated that insanity is not due to a vitiated atmosphere, nor to an abuse of what has been called "the lower passions," an abuse which he did not recognize; and that immunity from insanity does not consist in pure air.

He was not in a condition to speak from personal experience, but would use the report of Dr. Parsons for the year 1867. He says:

"There was an advance in that year (1867) of 15.50 per cent.; in 1868, 12.92 per cent.; in 1869, 12.63 per cent.; in 1870, 10.69 per cent.; in 1871, 5.12 per cent.; mark the descent, it is gradually less: consequently, there is no such thing as the future of insanity; *that* is a romance. In 1872, 11.68 per cent.; in 1873, 6.49 per cent.; in 1874, 8.48 per cent.; in 1875, 7.47 per cent.; in 1876, 10.30 per cent.—ten consecutive years!"

The next point which he desired to touch upon was the question of the influence of the lower passions in their relation to the causation of insanity. There are no lower passions. Every desire that human beings legitimately exercise and gratify is proper. It is one of the romances of the profession to assert the contrary. When men do not know what the cause of insanity is, as they do not, as the question, we have already shown, is an open one, they lay the blame to the passions.

But to return to the subject in hand. He, Dr. Beard, stated, on a former occasion, that the intellectual workers are, as a class, those who are subjects of insanity. It was not necessary to go over that ground again. He went back on that occasion to the time of Thucydides, who was twelve years the junior of Herodotus, the father of history, 6 B. C. 486, down to and including the men of the eighteenth century, and he failed to find any insane men among the mental workers of that period. In fact, if there is any class which may be considered as exempt from insanity, history has demonstrated this to be that class. By mental workers he did not mean those who go into the pulpit and read sermons and sing psalms—they are not, strictly speaking, of the class; but he referred to original thinkers, those whose advanced ideas and mental labors have influenced the world's history, as Franklin, who is said to have tamed the lightning, and Fulton, the inventor of steam navigation.

Now we learn, from Dr. Parson's report, that on Blackwell's Island, in 1875, forty-three of his patients were farmers' daughters; thirty-seven were wives of laborers; and twenty-six were domestics. These were the largest contributions of any other classes.

In addition to the above, he cited the following facts: In the report of the Willard Asylum for the Insane, New York, for the year 1877, we find that the number of patients admitted were: house-workers, eight hundred and two; teachers, forty-four; seamstresses, thirty-three. Only a few representatives from other occupations were inmates of that institution.

Ward's Island, Dr. Kellogg's Report: On January 1, 1873, there were four hundred and sixty-nine patients in the institution; admitted during the year, three hundred and ninety-two—making a total of eight hundred and

sixty-one. Among these were laborers, seventy-nine, and clerks, twenty-four.

Ward's Island, 1876, Dr. Macdonald's Report: Admitted, three hundred and eighty-one. Occupations: Laborers, ninety-three; clerks, thirty-seven—representing the largest element of any other in it.

Dr. McIlvaine then directed attention to the report of the Lunatic Asylum of Central Ohio for twenty-nine consecutive years. The admissions for that period were four thousand nine hundred and one; of whom two thousand four hundred and thirty-five were males, and two thousand four hundred and sixty-six were females.

An accurate record has been kept of the occupations of the inmates for twenty-six consecutive years. The result is as follows: Out of these four thousand nine hundred and one admissions, one thousand three hundred and forty-five were farmers, three hundred and seventy-five laborers, thirty-seven clergymen, eighteen physicians, and nineteen lawyers.

Also the Columbus, Ohio, Asylum for the Insane, Report of November 15, 1878: Whole number treated, one thousand two hundred and twenty-six, of whom five hundred and eighty-eight were males, and six hundred and thirty-eight females. Occupations: Farmers, two hundred and three; laborers, one hundred and forty-two; lawyers, three, and physicians nine.

At the Northern Ohio Asylum, Report for 1867, there were treated two hundred and ninety nine, of whom one hundred and forty-four were males, and one hundred and fifty-five females. Of this number there were farmers, thirty-three; farmers' wives, twenty-nine.

The total number of the insane in State asylums of New York for 1875, as per Dr. Ordronaux's report, before referred to, were: Males, one thousand and ninety-seven; females, one thousand and seventy-seven. In county asylums and poor-houses, males, one thousand five hundred and ninety-four; females, two thousand six hundred and ninety-seven; in private asylums, males, two hundred and twenty; females, two hundred and ninety; making a total of males, two thousand nine hundred and eleven, and females, four thousand and sixty-four; or a grand total of six thousand nine hundred and seventy-five.

Now, this matter of insanity is not new. Men were cured of insanity before there were asylums; and they

were treated properly, too. The late Governor Madara, who was Governor of "Bleeding Kansas" at one time, told the speaker in 1840, that in 1830, when he was Marshal of Northern Ohio, and before an asylum was erected in Ohio, the number of the insane was alarming. The actual number could not be ascertained. Persons were shut up in out-of-the-way places and in upper rooms of the houses, being confined to staples in the walls with chains; and when the census was taken they were not counted in on account of delicacy. In the year 1838 the first asylum was erected in Ohio.

He believed that, instead of an increase of insanity, it is diminishing. We need not be alarmed that it will overwhelm the nations. There is a good deal of romance mixed up with the subject, just as there was with the question of school hygiene.

With regard to these questions public opinion must be set right.

Were it not that the subject is a solemn one, it were amusing to examine the reports of the insane asylums from year to year. They have their stereotyped moral and physical causes. Many of them dwell on tobacco as a potent cause. Dr. McIlvaine's experience among gentlemen connected with the asylums leads him to believe that most of them use that weed, and would be perfectly safe from being devoured by dogs should they fall dead in the street. He would state an exception to that rule. His friend, Dr. Joseph Webb, brother-in-law of President Hayes, who had charge of Longview Asylum, Ohio, never used tobacco.

In conclusion, he said: We have shown that insanity is not attributable to a vitiated atmosphere, nor to the abuse of what is called the lower passions, because we do not recognize them; nor to alcohol, *per se*; nor that immunity from insanity consists in pure air, healthy food, and sanitary surroundings. We have shown that it is a delusion to suppose that intellectual people are the subjects of it, and that it is them only who are selected as its mark. Hence we may sum up that the causes of insanity are as obscure now as they were when first discovered; and the question, which we carefully recommend to those who are in charge of asylums, is still open for investigation.

SELECTIONS.

Rectal Alimentation.

THE absorbent power of the mucous membrane of the lower intestine has long been recognized both in the use of nutrients and medicines, but recently a fresh impulse has been given to this mode of treatment by articles which have appeared from time to time in the medical press. Although the rectum is inferior to the stomach as an absorbing surface, yet its power of appropriation and absorption is of great importance when from any cause the stomach is unable to perform its ordinary function. Medicines of a decidedly unpalatable nature, such as turpentine, asafetida, etc., are not unfrequently administered by the rectum, and especially so when there is any marked degree of irritability of the stomach, and such remedies have been found to produce the desired result almost as effectively as when administered in the ordinary way. Notwithstanding these facts, the subject of rectal alimentation and medication has up to the present time been considered a matter of merely secondary importance, and in many instances overlooked or neglected altogether. In the recent discussion on this subject, such as occurred in the New York Academy of Medicine last year, most valuable information in regard to rectal alimentation in its general application was elicited. In a paper by Dr. Austin Flint will be found a large number of cases in which the efficiency of this method was shown, leading to the assumption that "life may be sustained indefinitely solely by rectal introduction of aliments." Nutrition was maintained in a number of patients from three weeks to five years, the majority of them by rectal alimentation alone. In the present day the antiphlogistic treatment is almost obsolete. Most, if not all diseases, are being treated by the supporting plan; even in surgery the value of generous alimentation is fully recognized, and was ably advocated by Prof. Hamilton, of New York, a short time ago. The principle being established, it remains therefore only to show how the object can be best attained. Of course the most natural means, if adequate, is always the best, but if from any irremovable cause the function of the stomach is practically suspended,

rectal alimentation is clearly indicated. The materials usually employed are milk, raw eggs, animal broths, etc.; but since the publication of Prof. Leube's paper on rectal alimentation in 1872, the preparation he recommended has come largely into use, viz.: muscle of beef partly digested by an artificial process, and brought to a sufficiently fluid condition to be administered by means of a syringe. Quite recently desiccated blood has been brought under the notice of the profession as a new article for rectal alimentation. Some years ago the drinking of bullocks' blood at the abattoirs in New York and other places was indulged in as a cure for consumption and other wasting diseases, and not without benefit to the patients, but naturally enough it was disgusting to most persons. Transfusion has also had its day, and now we have the much more rational, agreeable and practical method of introducing blood into the system by the rectum suggested to us. This new method of treatment is no doubt worthy of trial, and the pharmaceutical chemists are prepared to supply it to the profession. The blood is first defibrinated, which does not destroy its nutritive properties, and afterward dried with the greatest care. Blood thus prepared and dried is completely soluble in water below the temperature of 160° F., and contains all the elements of blood except water and fibrin. When required for use it is dissolved in water in the proportion of one drachm of the powder to one ounce of water. The dose is from four to six drachms, which may be given at once or in divided doses during the day, as circumstances seem to require.—*Canada Lancet*.

The Prophylactic Use of Cod-Liver Oil.*

DR. THOMPSON began by remarking that next in importance to discovering a new remedy was the ascertainment of how it acted. This latter, indeed, may sometimes be of more importance, for such discovery may add to our knowledge of the pathology of the disease. Thus, if we knew how mercury relieved syphilis, we should know what syphilis is. There is one class of remedies, however, whose action we are beginning to learn something about.

* From discussion in New York Academy of Medicine, published in *Medical Record*.

These form the class known as restoratives. They are really only a kind of food, and as starvation is a very common condition, especially after febrile conditions, such kind of medicines is very often needed.

The way in which iron acts may be studied as an illustration of the rest. Iron enters into the composition of the red blood-corpuscles, and is essential to their functional activity. These corpuscles carry oxygen through the system. Iron is therefore a respiratory food. Now, muscular strength and activity is in proportion to respiratory activity, and the extent of respiratory surface. Insects have more proportionate muscular strength than mammals, because they have a larger respiratory surface. And so it is throughout the animal kingdom. When the blood-corpuscles, the oxygen carriers, are not sufficiently fed with iron, muscular weakness ensues. Thus, anæmia is a cause of muscular weakness; and the rationale of iron relieving the symptom is quite an evident one.

Our knowledge of the action of restoratives leads us to believe that they are the only drugs which can act as prophylactics. We can not understand how a purely foreign body can enter the system and prevent disease. We know that we can not prevent syphilis by giving mercury. We can see, however, that a substance which is a normal constituent of the economy may be given at a time when there is an especial drain on that principle, and thus prevent pathological changes which its diminution or absence might cause. The study of the use and action of cod-liver oil may lead us to conclude that this supplies a proximate principle to the economy, and may be used both to supply and prevent a diminished amount of that substance in the body.

History shows that cod-liver oil has been used from a very ancient date. Its extensive use, however, dates from 1849, when Bennett introduced it as a remedy for phthisis. Being a very complicated body, it was at first thought that its value was due to some of its peculiar chemical constituents. This is, however, hardly possible. Several of its organic constituents, such as the fatty acids, are the result of the chemist's manipulations. The inorganic constituents are so small in quantity that we should have to use homeopathic theories to suppose them to have any practical effect. Another theory is that the special action of the oil is due to its greater diffusibility, this be-

ing caused by the presence of biliary salts in it. This, however, is a false inference; for, in the first place, absorption is only one element, and we must explain the action afterward. Furthermore, it has been shown that emulsions of sweet-oil with ox-gall do not act as well as cod-liver oil, although very diffusible; and finally, it has been also shown that the lightest and purest oils, those freest from biliary constituents, are the best. The most satisfactory theory, therefore, is to suppose that the oil is allied in its composition to the highly complex fat of the blood, and that it supplies a natural constituent of that fluid. This theory is supported by the fact that cod-liver oil increases the number of the red blood-corpuscles. Now, it has been shown that the corpuscles contain the greater part of the fat of the blood, the proportion as given by some chemists being three in the corpuscles to two in the plasma.

From analyses of the blood of the portal and hepatic vein it would appear that in the passage of the blood through the liver, some of the fat of the serum is incorporated into the corpuscles, and it may be one of the functions of the liver to do this. The relative importance of fat in the blood is shown by analyses. There is double the amount of it that there is of iron.

The next question is, what is the business of the fat in the corpuscles? And here physical laws come to our help. By these, fat is shown to contain a very great amount of stored-up energy. A pound of ordinary tallow, for instance, has more stored-up energy than a pound of coal, or a pound of gunpowder. It contains more energy than albumen also, in the proportion of 38 to 18. The great business of fat, therefore, is to supply force. In the embryo a great amount must be required, and the late Mr. George Lewis was even led to propound the preposterous theory that the sole function of the spermatozoa was to furnish to the ovum a highly organized form of fat. He based this idea on the fact that spermatozoa are dissolved by ether. Fat bears much the same relation to the tissue-cells that steam does to the steam-engine.

With this view of the function and importance of fat, we turn to see what tissues contain the most of it in their composition. These we find to be the voluntary muscles and the brain. The brain, for example, contains 75 per cent. of water and 25 per cent. of solids, of which latter

15 parts consist of fat. The nervous tissue uses more fat than all the other tissues put together. Of course, adipose tissue is not to be reckoned in this connection, for it is practically stored-up fat and not a user of it.

Now, in view of this demand for fat on the part of the nervous system, we may study with special interest that period of childhood when the nervous system is growing most rapidly and when the demand for fat is greatest. Between the end of lactation and the sixth year the brain grows faster than at any other time. By the seventh year the head has often attained nearly its full size. Mothers are sometimes alarmed at the big heads of their children, and think that there must be something wrong about it. During these years the child acquires more than at any other period of his life. His perceptions are quickened, his memory taxed with the acquirement of language and all kinds of knowledge. The brain works better than it ever will again. All this puts a drain upon the system which renders the child peculiarly susceptible to certain diseases. After the ninth year the muscular system takes a start and its development becomes very rapid.

Now the rapid growth and great functional activity of the nervous system makes a demand upon the food-supply, and especially the fat. These special demands may lead to the impoverishment of other tissues. And those tissues will suffer first which are the least highly organized, and receive the least vascular nourishment. Thus we have resulting the corneal ulcer; then the cartilages degenerate, the epithelium of the skin and mucous membranes develops a depraved or diminished vitality. Scrofulous sores appear. Once establish a sore and the lymphatic glands become enlarged. For it is probable that the scrofulous enlargements of glands are caused by some previous sore with which the lymphatics connect them.

If the above views are correct, then the utility of giving cod-liver oil at this period of life is shown to have a logical basis. And we ought not to wait until the symptoms of starvation appear before giving the oil. The speaker had been in the habit of giving cod-liver oil to healthy children between the ages of two and seven, and he believed with benefit.

The usefulness of cod-liver oil in nervous diseases is also very apparent.

The paper being open for discussion,

Dr. S. Caro said that he agreed with the reader of the paper in thinking that cod-liver oil is of value as a prophylactic, and that it is to be regarded as a food rather than a medicine. He had known a poor family who were supplied with cod-liver oil through the kindness of a druggist, and who lived upon this to a large extent for a time. A girl in this family, which was a tuberculous one, had been suffering from chorea. While taking the oil she had recovered from it.

In the speaker's native country olive oil was much used as an article of food, and it was very nutritious. In the monasteries it was much used by the monks, especially in times of fasting, and the monks are, as a rule, quite-fat.

Dr. Sell referred to the value of olive oil. He thought that this and butter ranked next to cod-liver oil in nutritive properties. He related the case of a female physician who had suffered for a long time from constipation and a whole train of attendant evils. She became too weak and emaciated to study or work. Finally, a diet, of which olive oil was a large part, cured her. Just before the siege of Paris one could see how much olive oil was taken to supplement the scarcity of other food. Dr. S. had found the external use of cod-liver oil with children of value. He also spoke highly of the emulsions of oil with maltine and pepsine or pancreatine.

Dr. Thomson said, in reply to a question by Dr. White, that the best time to take the oil was about half an hour or an hour after meals.

Dr. Richards spoke of the necessity sometimes of having a cheap substitute for cod-liver oil. He had known whale oil to have been taken with good effects.

Dr. Farnham spoke of the value of cod-liver oil in lupoid affections, especially when it was taken in large quantities—as much, for instance, as two pints a day. He had known of cases which did not get any better under a pint a day, but showed marked improvement when the quantity was doubled. He had himself taken nine or ten ounces a day without any digestive disturbance. It increased his weight very much.

At the close of the discussion it was announced that \$500 had been turned over to the Academy from the estate of Dr. White.

It was voted that the next regular meeting be omitted, and that the Academy adjourn to the third Thursday in June.

American Gynecological Society.

THIS organization commenced its fifth annual meeting in the rooms of the Law School in this city, Wednesday, September 1st, at 10 o'clock A. M., Dr. J. Marion Sims, of New York, presiding. Dr. T. A. Reamy delivered the address of welcome.

The first paper read was that of Dr. Robert Battey, of Rome, Ga., on the subject, "What is the Proper Field for Battey's Operation?" He read from notes, and seemed quite at home on a subject with which his name has been identified for years. In his well-delivered essay he said that in the application of "Battey's Operation" there was no question of choice, but only of necessity. It was not a matter of expediency to expel the ovaries, but a matter of strict duty, where other remedies fail. The case must be deemed incurable, it must endanger life, and a cure must be reasonably expected before the operation is at all justifiable. He had foreseen the difficulties of its application, and its variable conditions many years ago. He enumerated briefly when the operation is absolutely necessary, which is in case of a complete reclusion of the intro-vaginal canal in menstruomania, ovarian epilepsy, ovarian hernia, and a few other cases. He said it was idle to talk about sending a patient to the Virginia Springs or treating her with violent medicines whenever there are successive nervous perturbations, or symptoms of reason being destroyed or life being endangered. There is absolutely no cure in such cases by any other resources of the art. He insisted that it was better to sacrifice these pernicious organs than endanger life. He had treated fifteen cases, and was not convinced of any wrong he had done, though two of these had been fatal.

Dr. Battey's paper provoked considerable discussion. Dr. Forsyth Barker was the first to discuss its merits. He labored under a marked hoarseness of voice, but was listened to with great attention. He related three cases where Battey's operation had been used with success, and referred especially to the peculiar condition of a girl who

suffered intense nervous excitement from a shock of lightning, which undoubtedly had an effect on the uterus, showing the intimate relation between the nervous system and the ovaries. Dr. H. P. C. Wilson, of Baltimore, said that he had now a case in hands, where he intended extirpating the ovaries, and that he had lost one case because of his neglect of using the operation. Dr. W. H. Byford, of Chicago, expatiated on the evil effects caused by the loss of the ovaries. The patient is ever after subject to hemorrhages and general depression. He knew of one well-known case where the tumor had made its appearance again long after the operation, with worse symptoms. He expressed his belief, however, in Battey's operation, and had himself inadvertently performed it in removing a hernial tumor twenty-five years ago. Dr. A. Dunlap, of Springfield, O., thought it ought to be the dernier resort in extreme cases, and never had a case where the operation was necessary. In conclusion, Dr. J. Marion Sims, of New York, gave a brief outline of his experience in the matter, stating that Spencer Wells had used the operation successfully for the first time in England in 1878; that Dr. Alex. Simpson had performed it twice and Dr. Austin Tait as many as twenty-eight times in one year. He had eleven special cases in eleven months, and out of the whole number of twenty-eight only two died, because these cases were not well selected. He pronounced Dr. Battey's operation as perfectly legitimate in some urgent cases, and had recently performed four operations himself. One of his patients had died, though not from the effects of the operation, and one had not been cured, but had developed worse symptoms than before. He urged that the main point was to discriminate in its use. Dr. Thomas Wood, in his quaint original way, stated that he had never practiced Battey's operation, but knew a little about ovaries. He said he had come across a great many hysterical cases at parties and balls, and if Battey's operation could remove that evil it was quite an acquisition. He said that the destruction of the ovaries makes social life very unpleasant, and gave a remarkable instance of a woman, whose one ovary had been destroyed, and who nevertheless bore six children afterward, three of each sex. He seemed to incline to the opinion that life was more pleasant with the ovaries than without them.

The next paper read was by Dr. G. S. Engelman, of St. Louis. It was elaborate and provoked an animated discussion.

Upon general request Dr. Battey gave the points of his subject a second time, which, after a short discussion, was wound up by Dr. Sims.

In the afternoon session Dr. H. P. C. Wilson opened by reading a paper on the "Case of Ovariectomy Complicated with Pregnancy." He presented a large variety of facts. Out of twenty-nine cases he had saved twenty-four mothers and twenty children. One tumor had been extirpated which weighed eighty-one pounds. One mother was in a six months' gestation, and after the surgical operation had no difficulty and was delivered safely of child. In the subsequent discussion Dr. Dunlap told of three cases which came under his personal experience, in one of which he did not know that the patient was pregnant. He was in favor of having an abortion performed previous to the operation in extreme cases. The life of the mother was to be regarded much more than that of an undeveloped child. He expressed himself as opposed to the smaller incisions of ovariectomy. Dr. Chadwick, of Boston, presented another view of the subject, urging that in many cases the operation was not necessary at all. He had two cases where the tumor was as large as the fetal head, and had simply removed it to one side, thus effecting delivery without interfering with the tumor at all. Three weeks ago he had operated on a tumor which measured six feet and weighed 140 pounds. He was not in favor of operating before the puerperal period, unless in cases of extreme necessity. Dr. Battey spoke of a case where the woman had ninety pounds of tumor and only seventy pounds of flesh. He tapped over six gallons of chocolate liquid from her at one time, and, though she was delivered safely, she died a short time after. He mentioned a few more cases where abortion was produced, in consequence of which the patient died. Dr. Byford explained his method to be the tapping of the patient two or three times before gestation. He characterized abortion as a very malicious practice, tending to the death of both child and mother. He knew of one case where the tumor was not removed until after two happy deliveries of the mother. Dr. Sims stated that he had had

two cases, in one of which he was not aware of the pregnancy of the patient, and yet she entirely recovered.

He said that sometimes the tumor bursts and kills the patient, and sometimes bursts to her cure. He would not interfere with tumors when they were small, but when they grow larger they must be operated on. Dr. W. W. Dawson, of this city, complained that the fashionable incision was a small one, but he thought that the incision should be large enough to remove all adhesions, and all particles of blood and other matter. He referred to Dr. Bradford's treating a woman without using the operation, merely through a sense of delicacy, because she was a physician's wife.

Dr. A. Reeves Jackson, of Chicago, read an exhaustive treatise on "Uterine Massage as a means of treating certain forms of Enlargement." He explained the causes of enlargement and reviewed the different methods of applying massage. Dr. H. F. Campbell, of Georgia, explained that quinine was the best remedy for such enlargement of the uterus, and that it would contract the extension the same as it does the blood-vessels. Dr. T. A. Reamy thought that massage would not contract, but enlarge the parts. During his remarks he said that Dr. Jackson, of Chicago, would not lie, whereupon the latter very good-naturedly replied: "I can lie, but, as my friend Mark Twain says, 'I won't lie.' In Chicago we never do lie." Dr. Sims, in conclusion of the afternoon exercises, congratulated all on the success of the meeting, and urged them to participate more lively in the discussions of the next day. Dr. J. W. Roseburgh, of Canada, was voted in as a member of the Society by acclamation. A sprinkling of female physicians was present in the afternoon, listening attentively to the papers read.

A reporter held an interesting conversation with Dr. J. Marion Sims, in which mention was made of the late fast of forty days of Dr. Tanner. The reporter inquired in regard to the doctor's cable dispatch from Paris to Tanner. In reply Dr. S. said:

"There never was anything in the world that excited such an interest as Tanner's fast. Everywhere I went in England, at the tables of the aristocracy, among all kinds of people, nothing else was talked of. First it was Tanner's fast, and then Tanner's subsequent feast. The subject pervaded all classes. When I was in Paris I sent

him that telegram to encourage him. I was satisfied he was an honest man. But he made mistakes. I would not have let him go to the park every day. I would not have let idle visitors go to see him every day, and so use up his nervous energy. When I went to London, the day after I sent the cable telegram, I found that half the people did not believe in the fast simply because of the way in which it was conducted.

"If he had put himself in the hands of the Neurological Society he would have had as watchers Prof. Austin Flint, Jr., of Bellevue; Prof. John C. Dalton, of the College of Physicians and Surgeons, and Prof. Arnold, of the University Medical College, three men who stand at the head of their departments of physiology. The profession all over the world would have accepted their report as legitimate and conclusive. Both for his own good name and for the benefits that would have accrued to science Tanner should have accepted the conditions offered him by Dr. Hammond."

Dr. Sims has only within a few days returned from Europe. While there he was the recipient of many honors. He had conferred upon him in Belgium the order of Leopold I., the Cross of the Legion of Honor, two orders of the Italian Government—one of which was the highest that could be bestowed—and an order from Spain and Portugal. All of these decorations were given to him for his discoveries and contributions to science. He stated that American gynecologists lead the world; that they are recognized as authorities in London, Paris and Germany.

Second Day's Session.

The second day's session of the meeting of the American Gynecological Society opened with a good attendance. The first day's programme not having been disposed of, because of the time occupied by discussions, the topics not reached at the close of that day were taken up.

The first part of business was the reading of a paper by Dr. R. S. Sutton, of Pittsburg, Pa., entitled "A Case of Cataleptic Convulsions Cured by Trachelorrhaphy." This was followed by one on the "Extirpation of an Encephaloid Kidney," by Dr. W. H. Byford, of Chicago.

Dr. H. F. Campbell, of Augusta, Ga., read an interesting paper on "The Value of Quinine in Gynecic

and Obstetric Practice." As to the supposed abortifacient effects of quinine, the paper commenced by saying that at a period not very remote from the present, though he had not seen much concerning it of late, the medical journals of this country contained frequent papers discussing, and most of them strongly asserting the oxytocic properties of quinine. The tendency and the precept of nearly all these communications were to the establishment of the opinion that the preparations of Cinchona are not only inapplicable but positively dangerous, and subversive in any and all the stages of pregnancy. "Abortions, miscarriages and premature births were strongly charged to its administration. Why this fusillade against quinine has ceased I am at a loss to divine, unless upon one or two somewhat different assumptions; either that 'the sword was sheathed for lack of argument,' or no one challenged the statements, as it was considered that the fact was too thoroughly established to require reassertion or further confirmation. In this opinion in regard to the action of quinine, after an observation of nearly forty years, I conscientiously give an unconditional denial. Of course I am speaking of a judicious and prudent use of the agent.

"We have only to be reminded of the thousands of pregnant women who must daily use the drug to prevent or break the force of paroxysms of fever, and to know the fact that the question of endangering pregnancy never enters the mind of either physician or patient, to be convinced of the fallacy regarding its abortifacient action. The multitudinous experimentation is familiar to all, and is being repeated every day."

The author of the paper was careful to say that miscarriages frequently occur in the malarial regions of the South, which are in no way attributable to quinine, but rather to the want of it. He then proceeded to show how greatly paroxysmal neurosis endangers the prosperity of pregnancy. "Paroxysmal fever of every grade and type may be regarded as a paroxysmal cerebrospinal neurosis, differing from neuralgia more strikingly than in many other respects, in the essential feature of pyrexia. Regarding, then, each paroxysm of intermittent fever as a temporary irritable condition of the cerebrospinal nerves and centers, attended with aberrations of sensation, and often of motion also, even to the de-

gree of convulsions in infants, it is not so difficult to estimate the liability of such paroxysms to excite abnormal contractions of the muscular apparatus of the pregnant uterus. Nor on the other hand to recognize the inestimable value of any agent which might control or thoroughly prevent the coming on of a condition so hazardous to the conditions of pregnancy. The subject of uterine irritability and threatened abortion having been placed in the above relation, distinctly obvious to all is the point to which we are tending. It is this: instead of withholding quinine in the fear that it may produce abortion or premature labor, it is to be given conscientiously and in efficient doses *to prevent abortion*; for in obviating the paroxysm and its wide-spread perturbations, we bring the woman out of peril and secure her from many possible calamities—the one to be most dreaded being the superinduced abortion. In the classic bluntness of Gooch we may find a precept: ‘Take care of the woman and the womb will take care of itself.’ The author cites one case in which miscarriage resulted from paroxysmal fever and refusal to take the quinine prescribed, and two cases in which abortion, resulting from paroxysmal uterine neurosis, was prevented by the use of quinine in doses aggregating fifteen to eighteen grains per day.’

PRESIDENT SIMS' ADDRESS.

The President, Dr. J. Marion Sims, of New York, then delivered the fifth annual address to the Society. Following is a brief abstract of that portion recommending changes in the Constitution. After speaking of the origin of the Society and its organization in the city of New York on the 3rd of June, 1876, the President goes on to say:

“We organized with forty members, limited the number to sixty, and then made subsequent membership difficult to obtain. I would advise for the present to extend the membership to one hundred, and to open the doors freely to all men whom we know from the work they have done and the reputation they have achieved, to be worthy of membership, and to all earnest working, educated young men, whose testimonials will establish their character as such. If we do this the time will probably soon arrive when membership should be limited.

“The Obstetrical Society of London opened its doors

widely and takes in the best men of every part of the kingdom. Indeed, many men in our own country, in Canada and on the continent of Europe, are active members of this learned body. They pay their annual dues, and in return receive the volume of transactions."

He recommended that some provision be made for transferring, under certain circumstances, active Fellows to honorary Fellowship.

After alluding to the fact that during the five years of the existence of the Society, its membership had increased by only nine admissions, he asked why the leading gynecologists all over the country are not clamoring for admittance. He thought the requirement of submitting an essay to be passed upon by a star-chamber council one cause, and the timidity of young men another. He thought the remedy was to take back the power delegated to the council, "and exercise the right of determining for ourselves the fitness of candidates for membership."

He recommended the alteration of the constitution so as to give the power of electing Fellows to the Society independently of the recommendation of the Council.

He thought the clause requiring from candidates the submission to the Council of a paper on some subject connected with gynecological science unworthy such a learned body, and should be expunged. "If we were a society of young sophomores, expecting to recruit our ranks from unknown men, we might ask them to give us a specimen of their ability in penmanship, composition and rhetoric, but such requirements from men who have made reputations is not only absurd, but an insult to professional manhood not to be tolerated."

He spoke of Kimball and Dunlap as "the teachers of us all, when but few of those who organized this Society were known beyond their immediate neighborhood, and many of them were in grammar schools. To their labors, in connection with those of the Atlers and Peaslee and Bradford, are we indebted for the successful establishment of ovariectomy as a legitimate operation in this country, and yet ignoring their labors in this direction, we organized a National Gynecological Society, leaving them out in the cold, when we would have honored ourselves if we had appointed a committee to wait on them and beg their acceptance of honorary fellowship with us."

He then recommended some further, but less important amendments to the constitution, and some amendments to the by-laws of the Society.

The last paper of the day was that on "The Instinctive (or natural) and Physiological Position of Women in Labor," by Dr. G. J. Engelman, of St. Louis. The paper dwelt principally on the position of women of barbarous or semi-civilized nations in child labor, and was illustrated by many drawings representing the positions assumed by women in the red, yellow and black races, together with others of civilized races. Among the drawings were representations of the negro method of suspending the woman in labor by her hands to a tree, one of the obstetric chair, and others of more primitive methods suggesting the chair. He had some respect for the advice of the old midwives of the last century, and believed the patients in the later stages of labor should be permitted to follow their own instincts as to position, with moderate restrictions.

The paper was discussed at considerable length by Dr. J. A. Eve, of Augusta, Ga.; Dr. H. F. Campbell, of Augusta, Ga.; Dr. Fordyce Barker, of New York; Dr. Theophilus Parvin, of Indianapolis, and Dr. Reeves Jackson, of Chicago.

The following is a list of members present from a distance:

J. Marion Sims, New York; W. T. Howard, Baltimore; H. P. C. Wilson, Baltimore; T. M. Drysdale, Philadelphia; J. R. Chadwick, Boston; H. F. Campbell, Augusta, Ga.; Theoph. Parvin, Indianapolis; W. H. Byford, Chicago; G. J. Engelman, St. Louis; J. R. Jackson, Chicago; S. C. Busey, Washington, D. C.; R. S. Sutton, Pittsburg, Pa.; J. C. Reeve, Dayton; G. H. Lyman, Boston; Alex. Dunlap, Springfield, O.; Dr. C. B. Miller, Lawrenceburg; Dr. M. H. Harding, Lawrenceburg; Dr. J. M. Kellar, Hot Springs, Ark.

Third Day's Proceedings.

The first paper read was by Dr. Theophilus Parvin, of Indianapolis, on "Secondary Puerperal Hemorrhage." It was an exhaustive treatise, elaborate in its details and extensive in the cases which it cited for various treatment. He explained the extreme danger of the accident, and advised the physician in charge to an unremitting

and acute attention. Dr. H. F. Campbell, in discussing the paper, expatiated on the frightful character of secondary hemorrhages, and said that he gave the most laborious attention to the woman in labor, never leaving his post for more than an hour at a time, because he so much dreaded the occurrence of hemorrhages. His plan was to compress and knead the uterus until a perfect relaxation of the distension had taken place. He had the greatest respect for the binder, and was very careful to remove all the clots of blood from the uterus. It was his custom to place a book on the region below the umbilicus, and raise the patient in the bed three or four inches by means of any suitable contrivance, in order to effect a more rapid circulation of the blood. In his practice he used injections of tincture of iodine, whenever the secondary hemorrhage appeared, and found that it left no clot, produced no pain, and left the uterus normally contracted. He was opposed to the use of chlorate of iron and would prefer the insertion of a "brickbat." He concluded by stating emphatically that he would rather kill the woman than allow her to bleed to death by *post-partum* hemorrhage.

Dr. H. P. C. Wilson, of Baltimore, described three cases of secondary hemorrhage which came under his treatment. He explained the cause of the accident to be the leaving of some foreign substance in the uterus, which festers and causes the dilutation. He had never been bold enough to inject iodine or iron, and generally had found the os sufficiently dilated to introduce the hand for removing all dangerous substances. He referred to a case which a few years ago had been published in the *Medical Journal*, where he found the woman to have five or six successive contractions and alternate expansions of the uterus, and in the desperation of the case, seeing the patient dying in his hands, he introduced his hand and scraped with force the lacerated tissues, thus stopping the hemorrhages and saving her life. Dr. Sutton enumerated five cases which he had in fourteen years, where the hemorrhage had each time occurred six hours after labor. In each case the uterus had been speedily cleansed, and in the first a four or five feet drop of ice water on the abdomen of the patient had stopped the flow entirely. In the second case the flow was stopped with a lump of ice. In the third, a solution of vinegar

was used with success. In the fourth, the uterus had been compressed, and whisky frequently administered, which resulted in a perfect cure. In a second confinement of the same patient, Dr. Wilson's method of scraping had been used with success. He had no experience in the use of iodine, though he believed that iron produced an ugly clot, and that ergot was often ineffective. Dr. F. Barker, of New York, called attention to the fact that malarial poison was not an infrequent cause of secondary hemorrhage, and that lately it had proved such in the city of his practice. Dr. Parvin, the author of the paper, in winding up the discussion, thanked his fellows for their appreciation of his treatise, and acknowledged that in his hurry he had forgotten about the malarial cause of hemorrhages.

Dr. W. T. Howard, of Baltimore, followed with a paper on "Three Fatal Cases of Rupture of the Uterus, with Laparotomy." The first took place on the 6th of October, 1878, with a woman in her thirty-ninth year, who had previously given birth to seven children. She felt a violent giving away and all pain ceased, but the head of the child disappeared in the abdominal cavity, necessitating in a few days the operation of laparotomy. He used quinine for allaying the fever and opium to relieve the pain, but the patient died on the third day. The next case was that of a woman who had been confined three times, and had been delivered once with the use of the forceps, and at other times with great difficulty. The same abdominal section was performed on her at the fourth confinement, and she died some days after from exhaustion, preceded by an excessive diarrhea. Among fifty operations of laparotomy there had been only twenty successful cases according to the new method, which, however, was an improvement on the old, where one only was saved out of twenty-one. He reprimanded those physicians who are prone to talk of their successes, instead of giving their experience of failures, the investigation of which would be far more valuable to science. Dr. Howard is a man of sandy complexion, of medium height, and possesses very marked features. His face is pointed and somewhat angular, and his eyes are deep seated in their sockets, but his physiognomy in all denotes a man of deep research and constant study. He was not ashamed to state that he had been unsuccessful in his three cases of

laparotomy, and suggested a new mode of operation in extreme cases, which consists in removing the lacerated uterus, thus preventing any suppuration to pass into the abdominal cavity. In discussing the paper Dr. Wilson indorsed the author's views, and gave it as his opinion that the greatest danger lay in allowing the slightest bit of matter or clot of blood to remain in the uterus. Dr. Theophilus Parvin thought it an operation of extreme danger, and advised the invention of means to lessen the danger. Dr. Campbell, of Georgia, complimented the author highly on his production, and insisted on the operation being called specifically, "Howard's Operation."

At three o'clock in the afternoon the consideration of the subjects announced on the programme was resumed. The first paper read was by the Secretary of the Society, Dr. James R. Chadwick, of Boston, on "The Hot Rectal Douche." Dr. Chadwick recommended the hot douche through the rectum for inflammatory conditions of the rectum and large intestine—acute or chronic—characterized by diarrhea, pain, backache, etc., and secondly, the conditions that follow inflammations of the pelvic organs, and of the pelvic peritoneum, or cellular tissue, characterized by painful defecation, backache, pain, or burning sensations in the abdomen, etc. He argued that the large intestines, which could be injected with hot water, were so disposed around and so contiguous to the pelvic organs that through them a greater surface of the inflamed portion could be reached with the warmth than by Dr. Reamy's method of vaginal injection, which, besides, was cumbersome and required too much apparatus. The injected intestines would act like a warm poultice, he said. In the discussion which followed, Dr. Howard, of Baltimore; Dr. Campbell, of Augusta, Ga., and Dr. Reamy, of Cincinnati, participated. Dr. Campbell indorsed the recommendations with great warmth, and had a little tilt with Dr. Reamy, who insisted that it was impossible to force water past the ileocecal valve sufficiently quick, or in sufficient quantities to retain its temperature, and effect the desired purpose. Dr. Sims quietly remarked that the speaker was mistaken, but Dr. Reamy insisted on the correctness of his proposition, and brought Dr. Campbell to his feet with a story of a house-breaker, captured on one of his criminal expeditions, who hid the evidence contained in a small box of fine saws and other tools in such a manner that soon after he was taken ill

with a disease of the bowels and soon died. An autopsy revealed the box of tools, which had passed the rectum, the sigmoid flexure, and the descending colon, and had lodged in a corner of the transverse colon and killed him. "Now," said the doctor, "you can't take a tool-chest up drop by drop!"

Dr. Reamy's paper on the "Ulceration of the Cervix Uteri" was next in order, but as the hour was growing late he gave way in favor of a paper that had been sent to the Secretary by the honorable member, Dr. J. A. Eve, of Augusta, Ga., on "Occlusion of the Gravid Uterus." After it had been read Dr. Sims called on Dr. Reamy for his paper, and he responded by giving the points of his paper, which he said was forty pages long—too long to read. This concluded the papers, and Dr. Sims brought the session to a close. He apologized for the slim representation of the New York members of the Society, spoke enthusiastically of the brilliant success of the meeting, socially and scientifically, and said its proceedings were as valuable as those of any of the past meetings. That he had come from Europe to attend it, and would always be willing to sacrifice Europe for the benefits he derived. He thanked the Fellows for the courtesies shown him, and after a glowing tribute to Dr. Byford, of Chicago, introduced him as the President-elect of the Society. Dr. Byford accepted the post, which he considered one of high honor, with a gratitude which he said he could not express. He recognized in it not so much an honor intended for himself as a compliment to the profession of the West. He congratulated the West on the successful meeting, and, after a vote on Dr. Chadwick's motion, declared the meeting adjourned to meet in New York City on the third Wednesday of September, 1881.

At the business meeting, held with closed doors in the afternoon, resolutions of thanks for courtesies received were extended to the medical profession of Cincinnati, and to the Cincinnati Fellows of the Society.

The following are the officers of next year:

President—Dr. W. H. Byford, of Chicago.

Vice-Presidents—First, Dr. T. A. Reamy, of Cincinnati;
Second, Dr. H. F. Campbell, of Augusta, Ga.

Secretary—Dr. James R. Chadwick, of Boston.

Treasurer—Dr. Paul F. Munde, of New York.

Council—Drs. A. H. Smith, of Philadelphia.

MICROSCOPY.

Immersion Lenses.

[From English Mechanic and World of Science.]

I NOTED in a letter that in Messrs. Powell and Lealand's newest formula $\frac{1}{4}$ water-immersion objective the front lens is somewhat greater than a hemisphere, and in order to utilize the spherical refracting surface beyond the "equator" the lens is fixed on a thin plate of glass, which is itself embedded in the metal mount that fits on the front of the objective. This plan of mounting front lenses on a thin plate of glass so that the setting need not encroach on the active spherical surface, seems to have been known to and practised by the late Andrew Ross in connection with dry lenses. Some ten years ago Tolles, of Boston, experimented with this plan of mounting, for water-immersion lenses. But I believe it is not on record that either Ross or Tolles ever attempted to utilize a front lens beyond the hemisphere.

The first notice I have met with, relating to the possible use of a front lens greater than a hemisphere, is in a paper "On the Question of a Theoretical Limit to the Apertures of Microscopic Objectives," by Professor G. G. Stokes, of Cambridge, published in the *Journal* of the Royal Microscopical Society, Vol. I., p. 139 (read at the R. M. S. on June 5, 1878). Professor Stokes there discussed the question from a theoretical point of view, and gave a demonstration, based on the assumption that such a front lens could be utilized, proving the possibility of apertures approximating to 180° , measured in the body of the lens.

In June, 1879, Professor Abbe brought over to England one of these high-angled $\frac{1}{4}$ objectives. He explained at the R. M. S. that he had found it necessary to prepare a special immersion fluid (an aqueous solution of chloride of zinc) for use with the new lens, because he had not found it possible to obtain a satisfactory correction of the aberrations with any of the refractive fluids previously in use. Even with the zinc solution he found it important to improve the corrections by a novel chromatic refracting device of his own contrivance, to be placed immediately below the eye-piece. While this immersion

medium remained in the desired condition, the definition obtained with the lens was remarkably good; but, unfortunately, the solution quickly became turbid and useless, so that Prof. Abbe did not venture to exhibit the lens at work in public. He stated that the difficulties of construction would probably preclude Mr. Zeiss from making such lenses for sale. I had the good fortune to see the lens tested under the most favorable conditions, and can affirm that it produced excellent results.

In applying this kind of front lens to the water immersion system, Messrs. Powell and Lealand have distinctly had in view to extend the aperture to the maximum *with water as the immersion medium*. The new $\frac{1}{4}$ has an aperture so near the limit (123° out of a possible 126°) that it may be taken to exhaust the problem of aperture—so far as it can be exhausted with the condition that the aberrations must be corrected *with water as the inter-medium*, and with that *initial power* of magnification. It is to be hoped that a similar aperture will be obtained with a much higher initial power of magnification—say, 1-8th, 1-12th, 1-16th, and 1-25th, which will practically close the water-immersion question until new refracting media are experimented with.

There can be no doubt that the development of the homogeneous immersion system is the problem of the future as regards attaining the limit of visibility with the microscope. In view of the success that has attained the construction of the new $\frac{1}{4}$ water-immersion, with a front lens greater than a hemisphere, Messrs. Powell and Lealand have not hesitated to engage themselves to construct a 1-12th on a similar formula, but for homogenous immersion. The first trial objective, temporarily built up, has yielded 132° , measured in crown glass, and a working distance of .006. It is expected that both these figures will be improved upon.

In a letter Mr. John Phin is good enough to inform us that not only have the Americans arrived at 80,000 diameters, but a "New Yorker" has obtained over 100,000 diameters, with sufficient clearness of definition to show *P. Angulatum* in dots." I do not presume to doubt the statement; but I would remark that, in Europe, lenses have been produced that more than rival any American lenses in the possession of the Army Medical Museum, as evidenced by the series of photographs of *Amphipleura*

pellucida in balsam, presented a few months ago to the R. M. S. by Dr. J. J. Woodward, and reported on by him. Now, with all the famous battery of lenses at his command (which includes specimens of the work of all the known opticians in America and Europe), Dr. Woodward has limited his micro-photography to about four thousand diameters. I think the inference may be justly made that Dr. Woodward—the American expert in microscopy *par excellence*—is satisfied that about four thousand diameters is the limit beyond which *less satisfactory work* is produced. With our present optical appliances, I regard any reference to 80,000 or 100,000 diameters as of no practical moment.

Finishing Slides.

HAVING used damar dissolved in benzole as a mounting medium for some time past, I find that, when thoroughly dry, the gum becomes brittle, and a slight jar is apt to start the covering glass, and rapid destruction of the slide follows. I have found it necessary, therefore, to run a ring of some tough material around the covering-glass to protect it, my efforts being directed to discovering a material that would give the necessary strength, that can be easily handled, so as to make a neat finish. I have found that the best results can be obtained by the use of a thick, copal, furniture-varnish, what is known as rubbing-varnish. As I have not seen the use of it mentioned in print, it may be new to some readers, and I therefore give the results of my experience.

I use the thickest, finest varnish I can procure, and put enough dragon's blood in the bottle to give it color, without destroying its transparency. It should be so thick that a small drop will not flow from the camel's-hair brush. The older it is the better.

The slide having been cleaned of superfluous gum or balsam, should have a little shellac varnish run around in the angle formed by the covering-glass and the slide, to prevent the colored varnish from running under the cover in the subsequent operations. When this is dry, which will be in a few minutes, the slide is mounted on the turn-table, and a sufficiency of the varnish "dobbed" around the edge of the covering-glass, extending over

the slide. The turn-table is then put in rapid revolution, and with the point of a knife applied to the glass, first outside on the slide and afterward inside on the covering-glass, a ring is spun, which may be made as narrow as is desired, and with its rounded top extending above the covering-glass. I find it very easy to turn a perfectly symmetrical ring.

The slides are laid aside in a dry place for at least a week to harden, when the superfluous varnish can be cleaned off from the glass, with a bit of soft linen rag, and rotten-stone and water, rubbing the whole mount gently, with circular strokes. This removes the superfluous varnish from the glass to the edge of the ring, leaving it with a clean circular edge, and at the same time rubs down any inequalities which may exist in the ring itself. After this, wash the slide well in fresh water, with a soft brush, to remove all traces of the rotten-stone, and gently dry it with a soft cambric handkerchief. When it is dry, a few circular strokes with dry cambric on the end of the finger, will give the ring a semi-polish, which leaves it with a very neat finish.

I usually clean the whole slide with the rotten-stone and water, so that when it is dried, and gently wiped, it is ready to receive the label. The whole process is quite expeditious, and the results are so satisfactory, in the permanence and finish of the slides, that I am confident, if any one gives it a fair trial, it will supersede all other cements for a like purpose.

BOOK NOTICES.

A TREATISE ON COMMON FORMS OF FUNCTIONAL NERVOUS DISEASES. By L. Putzel, M. D., Physician to the Clinic for Nervous Diseases, Bellevue Hospital Outdoor Department, etc. Svo. Pp. 256. New York: Wm. Wood & Co.

This is the eighth volume of "Wood's Library of Standard Medical Authors" for 1880. These works are sold by subscription only—twelve volumes each year for \$15.

This volume on functional nervous disorders will be found interesting and instructive, containing, as it does, a large amount of information in regard to a very im-

portant class of diseases—a class of diseases which physicians are more apt to be least informed about, but which are exceedingly common.

The first part of the work is devoted to the consideration of Chorea, Epilepsy, Neuralgia. The second part treats of Peripheral Paralysis—under which head all the various paralyses are considered. It will be observed that, in a work of 256 very closely printed pages, the nervous affections which the author treats are treated of at very considerable length. For instance, in discussing chorea, there is a chapter devoted to its clinical history, a chapter to its etiology, one to its pathological anatomy, another to its pathology, and another to its diagnosis and prognosis. The same way is epilepsy treated.

Nearly half the work is devoted to the consideration of peripheral paralysis; and this portion alone, in consequence of the large amount of valuable information contained in it, is worth many times the price of the work.

The remarks of the author in the case of a divided nerve is of interest and we will therefore quote: "Within a few days after the receipt of the injury the peripheral portion of the *nerve* begins to lose its excitability to both the faradic and galvanic currents, and this keeps on steadily increasing. . . . Entire abolition usually occurs within a period of about two weeks. When recovery occurs the irritability of the nerve to both currents slowly reappears and increases until it has resumed its normal proportions. It is a curious fact that even after the paralysis is on the high road to recovery the nerve will not respond to electrical stimulus, although it readily allows the transmission of the impulse of the will; *i. e.*, the patient can move the muscles voluntarily, although they will not contract upon passing an electrical current through the nerve."

ATLAS OF SKIN DISEASES. By Louis A. Duhring, M. D., Professor of Skin Diseases in the Hospital of the University of Pennsylvania, etc. Part VII. Eczema (Pustulosum), Impetigo Contagiosa, Syphiloderma (Papulosum), Lupus Vulgaris. Large quarto. Philadelphia: J. B. Lippincott & Co. Cincinnati: R. Clarke & Co.

We have noticed previous numbers of this Atlas of

Dr. Duhring as they have been issued. We will say of this, what we have said of other numbers, that the colored plates are most accurate, exhibiting the various skin affections just as they are seen in the living subject. The complete work will certainly be of great value, for, with it, the physician and student can study skin diseases as if he had cases of each affection before him. It is all that can be wished for in the way of plates—far more than could be reasonably expected. No portrayals of dermatology heretofore have been as accurate as these. The price, per part, is \$2.50.

THE MICROSCOPIST: A Manual of Microscopy, and Compendium of the Microscopic Sciences; Micro-Mineralogy, Micro-Chemistry, Biology, Histology, and Practical Medicine. Fourth edition. Greatly enlarged. With 252 illustrations. By J. H. Wyethe, A. M., M. D., Prof. of Microscopy, etc., in the Medical College of the Pacific. 8vo. Pp. 434. Philadelphia: Lindsay & Blakiston. Cincinnati: R. Clarke & Co. Price, \$5.00.

From this work having reached a fourth edition in the short time since it was first published, it would seem to have attained to very considerable popularity in the profession. This is undoubtedly owing to its having been prepared to meet the wants of the physician to a greater degree than the generality of other works. Very considerable space and careful directions are given for the use of the microscope in micro-chemistry, biology, histology, pathology, etc. There are many colored plates of objects in different departments of microscopic research; and those representing urinary deposits are particularly good.

As usual with works on the microscope, considerable space is devoted to the description of accessory apparatus, which we think it would have been better to have omitted and filled the pages with other matter, or have reduced the volume that much in size. These subjects are best relegated to works devoted exclusively to descriptions of the microscope, and they should not encumber works in which the primary object is to teach what the microscope unfolds. Since our author, however, does enter to some extent into the field of microscopy, and gives some attention to instruments, we will mention that

he seems to be better acquainted with instruments of French manufacture than with American or English make, although the American and English are much superior to any of the Continent.

In conclusion, we will say that, as a practical work for physicians, Prof. Wyethe's work is superior to any with which we are acquainted, and to all such we very cordially recommend it.

CORRESPONDENCE.

WHAT A STUDENT THINKS OF THE LECTURES.

TO THE EDITOR:

On arriving in the city, in common with many other students I was struck with the strong feeling which seemed to exist in professional circles in this city in regard to the hospital and its lectures.

Coming from the interior of the State, with little opportunities for the study of disease, I naturally desired to avail myself to the fullest extent of the advantages of this large institution. My preferences were, therefore, in favor of those engaged in teaching in the hospital, my great object in coming here to attend lectures being to have the advantage of the instruction of gentlemen, who, occupying positions in so large a hospital, ought to be well qualified to impart instruction to the rural mind. For it is well known that, in those centers of medical learning where instruction has attained its highest development, the utmost attention is given to accurate and methodic instruction at the bedside of the sick. It is this practical instruction, this presentation of actual fact, which we expect as students to find in the course of lectures at such an institution. But, above all, a student has a right to expect that the gentlemen engaged in teaching school have a sufficient amount of knowledge to instruct those who resort to the hospital for this purpose. I confess I have been grievously disappointed in the high expectations which I had formed before coming here; and this expresses the general sentiment of the best informed students. Instruction is clinical in name only; a case is brought in from a remote ward, and the lecturer delivers a dry, dull and spiritless harangue in a monotone which

wearies the flesh beyond endurance. He retails trash of the olden time, makes errors on anatomical and physiological points which any intelligent student can correct, and thus, appearing in a ridiculous light, loses all authority as a teacher. It is true there are a few exceptions to this statement, but I think it may be said of the best of them that they give us students little more than the cold victuals or the hash—poorly seasoned at that—of some former reading. Of the patients themselves we see only those brought into the amphitheater, and of their diseases we only hear the occasional references made by the so-called clinical lecturer. No opportunity for rendering ourselves practically familiar with those important aids to the work of a medical practitioner as physical diagnosis, auscultation, percussion and the other means of obtaining practical bedside knowledge, is afforded us. In the hospitals of the Eastern cities, I am told, every opportunity is given by auxiliary courses of obtaining practical knowledge. I see advertised in the medical journals courses of this kind given in all the hospitals of the East. The students, who discuss these things freely, are, of course, very much disappointed at this very unsatisfactory kind of clinical teaching. They do not go to the hospital to get didactic lectures, for they are delivered more systematically and more thoroughly at the various medical colleges. The students think that less fuss had better be made about the expense of the hospital, and more attention paid these practical matters. We are not interested in what it costs the people of Cincinnati to keep up the hospital, but we are interested, as we pay our money therefor, that a course of really clinical lectures shall be delivered. If Cincinnati has not men able to deliver these, I, for one, and I have heard many others say the same thing, will go where we can obtain such advantages. As it is, in the walking cases we merely see the patient, and in the bad cases not even this, but only the bed-clothes which cover him; and we have to take it for granted that symptoms exist which the clinical lecturer affirms to exist. If this is the style of clinical teaching, they might as well tell us that such a patient is down in the ward and not present him at all, and the instruction will be just as *clinical*.

A little old fellow twirling his thumbs pounds with his fist on the aforesaid pile of bed-clothes, and says: "Gentlemen, here we have the dullness of pneumonia." Another,

a heavy, heavy weight, covers the blackboard with sums, and repeats some stale facts about the connection of the weather and disease, which has as little relation with the patient under discussion as the vasomotors to a train of cars. Still another favors us with arguments in favor of tying the navel-string for two long and weary hours. Now, if this old gentleman doesn't know that it is necessary to tie the navel-string, any old woman can inform him. This ancient bumpkin, the older students say, orates upon this subject every year. There is also there a juvenile milk-sop, apparently an escaped clergyman, who talks mildly about some surgical subjects which he is too dainty to handle in a practical way.

Now, it does seem strange that in a city like Cincinnati there can not be found men who are better qualified for medical teaching. If there can not, there should be a stop put to the false statements put forth annually by the medical colleges in this city. I am told that a new set of lecturers will come on about the first of December, but I learn that, with one or two exceptions, they are not any better, and in some respects worse.

The very poor kind of lecturers with which the hospital is furnished indicates either an inability of the city of Cincinnati to furnish a better (which we do not believe, judging from the lecturers in the colleges), or that the directors of the hospital are too ignorant to make a good selection. Any way, there is something wrong, and if they want to encourage students to come to Cincinnati they must make an effort to do better in their hospital.

My own observation in this city has taught me that those who lecture and tend best are best qualified to treat the sick, hence I must conclude that the treatment of the sick in this hospital is not up to the standard. When we hear the prescriber abusing the liver for all manner of ailments, and urging mercury as a panacea in its diseases, we know that he belongs to the antediluvian race of doctors, and when we hear, week after week, the same old speculations, until they become a by-word among the students, serving to nickname their teacher, about the vasomotors, etc., we know that the instruction is not of the sound and judicious character which it ought to be in such a place. If, Mr. Editor, you conclude to publish this letter, and several students unite with me in the request that you will be kind enough to do so, I will soon forward

you some personal sketches of those interesting individuals who do the clinical business at the Cincinnati Hospital.

STUDENT.

EDITORIAL.

PARTIES who advertise will consult their interests by advertising in a well-established journal—not one just commenced, nor one that has lived out its day of usefulness and is kept alive by occasionally buying up the subscription list of a defunct contemporary. It is better to pay a reasonable sum for space in a journal of large *bona fide* circulation than a very small sum in a journal of scarcely any circulation.

THE MEDICAL NEWS is the cheapest medical journal to advertise in of any medical journal in the West—not because it charges less per page, but because it has the largest circulation. Those who advertise in it usually continue their advertisements so long as they continue to advertise in any journal. In looking over the advertising form it will be observed that not a few of the advertisements have been appearing for years.

We hereby append the post-office law in regard to periodical publications. By noticing it, and keeping it in mind, hard feelings would sometimes be avoided:

UNITED STATES POSTAL LAW.—1. A postmaster is required to give notice *by letter* (returning a paper does not answer the law) when a subscriber does not take his paper out of the office, and state the reasons for its not being taken. Any neglect to do so makes the postmaster *responsible* to the publishers for payment.

2. Any person who takes a paper from the post-office, whether directed to his name or another, or whether he has subscribed or not, is responsible for the pay.

3. If a person orders his paper discontinued, he must pay all arrearages, or the publisher may continue to send it until the payment is made, and collect the whole amount *whether it be taken from the office or not*. There can be no legal discontinuance until the payment is made.

4. If the subscriber orders his paper to be stopped at a certain time, and the publisher continues to send, the subscriber is bound to pay for it *if he takes it out of the post-office*. The law proceeds upon the fact that a man must pay for what he uses.

5. The courts have decided that refusing to take a newspaper and periodicals from the post-office, or removing and leaving them uncalled for, is *prima facie* evidence of intentional fraud.

PRIZE ESSAY ON THE FUNCTIONS OF THE OPTIC THALAMUS.—Dr. Wm. A. Hammond, of New York, offers a prize of five hundred dollars, to be awarded by a committee of the American Neurological Society, at the meeting in 1882, to the author of the best essay on the subject named. This prize is open to neurologists in all parts of the world. Should no essay be deemed worthy, the offer will continue until 1883.

CHIAN TURPENTINE IN CANCER.—This remedy, first recommended by Dr. Clay, of Birmingham, has been in use for some time past in Great Britain and the Continent in the treatment of cancer, especially of the female generative

organs, and has been attended with very beneficial results. It is prepared for administration as follows: Dissolve one quarter of an ounce of Chian turpentine in half an ounce of sulphuric ether (anæsthetic), then add solution of tragacanth, four ounces; syrup, one ounce; flowers of sulphur, forty grains, and water to sixteen ounces. Dose, two tablespoonfuls three times a day. A lotion containing six grains of arsenious acid to a pint of water may also be used locally at the same time.

SUBSCRIPTIONS TO PROFESSOR CLAUDE BERNARD'S MONUMENT
SOLICITED.

Mr. Editor:—Having been selected by the Paris Committee (Messrs. Ranvier and Dumontpallier), having charge of the subscription for a monument or memorial to the late Prof. Claude Bernard, to represent them in the United States, I beg leave to be allowed to use your columns for the purpose of appealing to the members of the medical profession, and all others interested, to subscribe to this worthy project.

I need hardly remind your readers of the great debt which every practising physician owes to the labors of the illustrious physiologist whose memory we are asked to honor in this way.

All inquiries and subscriptions, in the shape of bank checks or postal money order, should be addressed to me.

Yours, very respectfully,

E. C. SEGUIN, M. D.

NEW YORK, *July 31*, 1880.

TUBERCLES.—The results of Cohnheim's researches are, that the inoculation of other matter may produce septic poisoning, but that of tubercular matter never. Inoculation may be made by introducing a *fresh* specimen into the subcutaneous cellular tissue; by causing the animals to swallow it, or by making them breathe an atmosphere charged with it by diffusing the material through it with an atomizer. When tubercular materials were taken into the stomach, the glandular structures of the intestines and mesentery were found filled with tubercles; when breathed, the bronchial and tracheal glands, the pleura and the lung structures were affected, while the abdominal organs remained free; when inoculated into the an-

terior chamber of the eye, the iris and choroid were first affected and the entire body subsequently; when the subcutaneous tissue receive the virus, the nearest lymphatic glands first, and every structure of the organism subsequently, showed the specific deposits.

CREMATORIES.—We learn that a retired merchant of Pittsburg contemplates erecting a crematory for the incineration of human corpses near that city. There is to be connected with it a beautiful and attractive building, with verandahs, and, without the same, will be built seats for the convenience of those who may attend the cremations. The interior will be fitted up in a manner at once attractive and appropriate, so that there will be nothing repugnant to the sensibilities of any person in the construction of the whole building. The retorts will be so arranged that incineration will result in a little more than an hour. The fronts of these retorts will be of mica, so the process can be observed, if so desired. In fine, the whole building and appointments are to be marvels of convenience and scientific skill. Urns will also be furnished for the collection of the ashes. These urns will have stamped upon them the date of the birth, death, and cremation of the person whose ashes they hold, besides a place for photograph of deceased.

The arrangements will be quite as complete as in the crematories at Leipzig and Gotha. In these cities very suitable buildings and furnaces have been erected. The incineration in the latter has been said to have been accomplished in forty minutes. There is no smoke and no odor, the flames being driven in upon the body through a series of tubes, and the smoke being consumed as fast as formed. Societies have been organized in Germany for the popularizing of this method, the members agreeing that at death the society shall conduct the funeral rites and dispose of the corpse by fire.

SCHOLARSHIP IN MEDICINE.—In Norway, it is stated, in order to matriculate as a student of medicine, the applicant has to pass most rigid examinations in arts, including Norwegian, German, French, English, Latin, Greek, mathematics, geography, history, philosophy, including the higher mathematics, zoology, botany, astronomy, and the elements of chemistry and physics. But in the United

States, with the exceptions of probably a single school, it is not inquired of a candidate for graduation if he can write his own name; and of those who are graduated not one in twenty-five can read his Latin diploma.

While we do not think that a knowledge of so many languages is necessary for a physician as is required in Norway, yet we do think that he ought to have a knowledge of the grammatical construction of his own, and be able to read Latin with tolerable facility. The names of medicines and names of anatomical parts, etc., are expressed in Latin, and, of course, a knowledge of that language, to some extent, will facilitate a student's progress. But independent of advantage in this respect in knowing Latin, its study disciplines the mind and imparts a culture that does not attend upon any other study. Many are under the impression that mathematics is a study calculated to enlarge and strengthen the reasoning faculties; but while they no doubt tend to discipline the mind to some extent, yet it is not observed that mathematicians are logicians. In fact, it is noticed that they excel in reasoning only in regard to lengths and breadths, measurements of squares, cubes and circles. But the classical scholar's research into the writings of the ancient sages, with a knowledge of their language, which has a beauty and science in its construction that is not found in any modern language, largely extends the scope of the mind, strengthens its logical powers, and cultivates and refines. It is the classical scholar who extends the limits of mental and moral philosophy, deduces facts from history, unfolds natural laws and understands the penalties of their violation. While the study of ancient languages may be too much indulged in, in that all college students are required to study them, no difference for what calling in life they may be preparing for, yet we believe that there is no study that better fits one for the study of medicine than they do. We believe that it would greatly conduce to the benefit of the profession if all matriculants were required to have considerable knowledge of the Latin language—enough at least as to enable them to read easy Latin authors.

CHIAN TURPENTINE IN CANCER.—We have published very considerable recently in regard to the treatment of *cancer* by Chian turpentine. It has been employed more in can-

cer affections of the uterus than in cancer involving any other organ; but we do not see why it would not be equally efficacious in the latter instances. If cancer is a constitutional disease, and we believe it is, it would yield as readily to Chian turpentine when located in the breast, or situated upon the lip or tongue, or in the stomach or liver, as when implicating the uterus. In such a case the germs of it are circulating in the blood, and the cure of uterine cancer is brought about by the destruction of these germs by the turpentine as it meets them in the blood-vessels; and the same result, of course, would occur in cancer of whatever organ or part, as the local affection would be but the visible manifestation of the diseased system. Some, however, consider it but a local disease. If this should be the correct hypothesis, the action of Chian turpentine in curing uterine cancer would have to be explained by the theory that the medicine has a special affinity for the uterus in the way of modifying its nutrition or producing, in some way, changes in its structure, molecular may be, so as to be incompatible with such a condition as cancer. If the remedial effects of this agent is limited to cancer of the uterus, it would go far to prove, in our opinion, that cancer is purely a local disease.

In a recent number of the London *Lancet*, Dr. Clay reports four cases of uterine cancer treated by Chian turpentine. We quote the following account:

"One of the patients, twenty-five years old, had scirrhus of the body and cervix uteri. Hemorrhage was profuse and dangerous; pain agonizing and cachexia well marked. The cavity of the uterus was so eaten out that three fingers could easily be passed into it. The other cases were much of the same character; two much more advanced with enormous cancerous tumors. The remedy is exhibited in the form of pill or solution. If given in pill, he advises a combination of turpentine and flowers of sulphur—six grains of the former to four of the latter—to be made into two pills, which are to be taken every four hours. If a solution is desired, one ounce of the turpentine should be dissolved in two ounces of pure sulphuric ether; solution of tragacanth, four ounces; syrup, one ounce; flowers of sulphur, forty grains, and sufficient water to make sixteen ounces. Of this, one ounce should be given three times a day. The dose of the turpentine

may with safety be increased up to twenty-five grains. The remedy must be continued for a long time; but Dr. Clay thinks it best to give the patients a few days of rest every three or four weeks. To thoroughly test its efficacy, he tried it alone without any local treatment. The relief from pain is marvelous. The discharge, while at first increased, gradually becomes thin and less, and finally is suspended. Many agents were combined with the turpentine, and other varieties of turpentine were tried, but in every instance it was found that the Chian turpentine alone exerted less deleterious influence upon the digestive organs, and could be administered for a much longer time alone. It appears to act upon the periphery of the growth with great vigor, causing speedy disappearance of infiltration and arrest of further development of the tumor. Pain and hemorrhage is promptly arrested. glandular involvement is prevented, and the peculiar cancerous cachexia disappears. Cicatrization is rapid, firm and healthy."

It is claimed that the demand for the agent is so great that the market is flooded with a bogus material, and this is held to account for its failure in some reported cases.

FOR SALE.—There has been received at the office of the MEDICAL NEWS, some additional medical batteries and microscopes, which will be sold at a bargain. They are new and in first-class order. There is on hand a German microscope, large, in a solid Spanish mahogany case, four objectives, and a number of articles of accessory apparatus. The highest power is an immersion one-sixth, of high angle of aperture, correction for glass cover. The cost in Germany was \$300.00. Will be sold for \$250.00. In perfect order.

We desire to direct the attention of our readers to the advertisement of Messrs. Reed & Carnrick. In it they will see the testimonials of those of high scientific authority as to the value of MALTINE. At the same time we will say in regard to Horlick & Co., that their food for infants and invalids is rapidly displacing all others of the kind. We have used it and know it to be as represented.

PHOSPHOROLE.

PHOSPHORUS and COD-LIVER OIL

have now an established position throughout the civilized world as important therapeutical agents. A *perfect combination* of the two has long been a desideratum, since they are both of value in the same disorders, while the cases in which one is demanded and the other contra-indicated are exceedingly rare.

The combination in PHOSPHOROLE has the twofold advantage of furnishing *the best possible form* for the administration of *phosphorus*, and a *more effective form* for the administration of *cod-liver oil*.

With regard to the former, it has been decided by the highest chemical and medical authorities that *phosphorus* should be administered *in a free state*, and in a vehicle which ensures its *perfect diffusion*, its *absolute unalterability*, and, as far as possible, its *prompt assimilation* without the gastric irritation to which the ordinary methods of exhibiting the agent give rise. It is well known that pills, emulsions, solutions in ether, chloroform, vegetable oils and resin, etc., have all failed to fulfill one or more of these conditions. Even an ordinary solution of phosphorus in cod-liver oil would not answer the purpose in all respects. We claim, however, that PHOSPHOROLE completely satisfies all the conditions. From the method of preparing it, in an atmosphere of dry carbonic acid, the phosphorus is *entirely dissolved without oxidation*, and by our mode of manipulation a *positive uniformity of strength* is ensured. It is then promptly bottled and sealed, and its *stability and permanence* thus secured. The exact amount of phosphorus in each dose is known, its efficiency is ensured, and the irritant effects upon the stomach are reduced to a minimum by the blandness of the oil. As a means then of administering *phosphorus* in the many cases in which it is indicated as a *nervous tonic and stimulant*, it is claimed that PHOSPHOROLE is the best attainable in the present state of our knowledge.

The value of *cod-liver oil* in phthisis is so familiar to the physician that it is needless to dwell upon it. But the value of *phosphorus* is also universally recognized in this disease, especially when complicated with nervous derangements. The *combination* of the two therefore furnishes a more effective form for the administration of cod-liver oil in the great majority of cases in which that remedy is indicated, and one which will at once commend itself to the profession.

A dose of two teaspoonfuls of PHOSPHOROLE contains $\frac{1}{100}$ of a grain of phosphorus. This dose, when given after a meal, is effective, and not very liable to interfere with digestion. *Phosphorus is cumulative in its action, and should be administered with watchful care.* About $\frac{1}{12}$ grain is considered the largest safe dose, and we rarely need go higher than $\frac{1}{20}$ or $\frac{1}{30}$ of a grain. At the very first appearance of the smallest gastric derangement, the exhibition of phosphorus should be stopped.

PHOSPHOROLE is handsomely put up in pint bottles only, and may be obtained at all first-class druggists throughout the United States.

Descriptive Circulars furnished upon application.

Correspondence with Physicians solicited.

BILLINGS, CLAPP & CO.,

MANUFACTURING CHEMISTS, BOSTON.



FACTS FROM OHIO.



THE USE OF DEXTRO-QUININE IN INTERMITTENT FEVER.

Case.	Name, and sex of patient.	Age, etc.	No. paroxysms before taking.	Paroxysms etc. taking.	Dose and mode of exhibition.	Total amount exhibited.	Remarks, pathological and physiological phenomenon, etc.	Reported by
34	Miss D.	28	Unknown, a great many.	0	3 grs. every 3 hours.	30 grs.	Had been under treatment of about four months with Cinchonidia Sulphate, which would control the paroxysms at the moment but they would invariably return. Used <i>Dextro-Quinine</i> in the same doses and there has been no return of the chills. Another case, Mrs. B., et. 57, was unable to take Cinchonidia on account of the severe tinnitus aurium, etc. I prescribed <i>Dextro-Quinine</i> without any head symptoms with satisfactory result.	G. S. Krieger, M.D., Lebanon, O.
74	Geo. C., male. "Has used Quinine until the name of it gave him the horrors."	28 Single.	Unknown, has been suffering with almost daily paroxysms for nearly 2 years.	0	9 grs., in three doses of 3 grs. each, 3, 2, and 1 hour before the expected attacks.	9 grs.	Missed chill on first day, put him on pills containing <i>Dextro-Quinine</i> , Ferri. Acid Arsenious and Ext. Nux Vom., and has had no return of chill to date. This man in connection with the chills was down with the yellow fever in Memphis during the late scourge. He returned here and has been under my treatment ever since his return. I have used Quinine and Cinchonidia with very poor success in his case.	B. S. Chambers, M.D., Cincinnati, O.
143	Miss Smith.	27	3	0	4 grs. every 2 hours combined with 1/2 gr. doses of Capsicum.	16 grs.	The best word I can say for <i>Dextro-Quinine</i> is, that I have not prescribed any other anti periodic since receiving sample of <i>Dextro-Quinine</i> . I find the action more certain when combined with Capsicum, as I also did with Sulphate of Quinine.	J. W. Lisle, M.D., Millfield, Ohio.
144	Miss Artz.	25	For 3 years more or less frequently.	1	4 grs. every 3 hrs. until 16 grs. were given, then same repeated.	32 grs.		
145	Mrs. C. Taken Quinine without any effect.	25	15	0	2 gr. pills, every 2 hours.	34 grs.	Had taken quinine without any effect. Had had no return since using the <i>Dextro-Quinine</i> . Now over four months.	J. Frank Victor, M.D., Gillead Station, Ohio.
150	Lena Rush. Had taken 15 grs. of Quinia daily without effect.	26 mother 4 children	8	0	2 gr. pill every hour till 5 were taken.	20 grs.	Paroxysm every day about 4 p.m. Cold and hot stages short, followed by very profuse sweating. Had taken Sulphate of Quinia 15 grs. per day, without any effect whatever.	A. J. Learned, M.D., Pataskala, Ohio.
178	Mr. C.C.	40	20 or more.	0	5 grs. every 3 hrs. until 30 grs. taken, then 5 gr. 3 times a day.	120 grs.	I find that it is equally as good as Quinine Sulphate, with none of the unpleasant head symptoms derived from the latter.	J. F. Heady, A.M., M.D., Springdale, Ohio.
179	Mr. H.O.	42	Two, but often had them previously.	0	5 grs. every hr., till 30 grs. were given.	30 grs.	Perfectly satisfactory. Have obtained only good results in the cases in which I have used the <i>Dextro-Quinine</i> .	
192	Jas. L.	26	About 30.	0	15 grs., in 3 powders, 3, 2, and 1 hr. before the chill.	15 grs.	In all these cases I began treatment with Cathartic, then after chill was checked put them on tonics, and on 7th, 14th and 21st days, I repeated the dose in lessened quantities. I very seldom have any trouble with return of chill.	
193	Annie C.	17	3	0	12 grs., in 4 pills, 2 at night and 2 in morning.	12 grs.	I sent you report of the 1st case I had, Geo. Caldwell, which was the worst case I have ever seen. He has never had any return. I have used it in a large number of District Physicians with about the same average result as when I used the Sulph. of Quinine. I can report, New York.	B. S. Chambers, M.D., New York.
194	Jas. J., col'd.	38	About 30.	0	20 grs., in 4 pills, 4, 3, 2 and 1 hour before chill time.	20 grs.	I send 3 reports of cases from my own O. D. P. list. Of course, cases of this kind are usually of the very worst type. I send from my list, cases Nos. 15, 33, and 4.	

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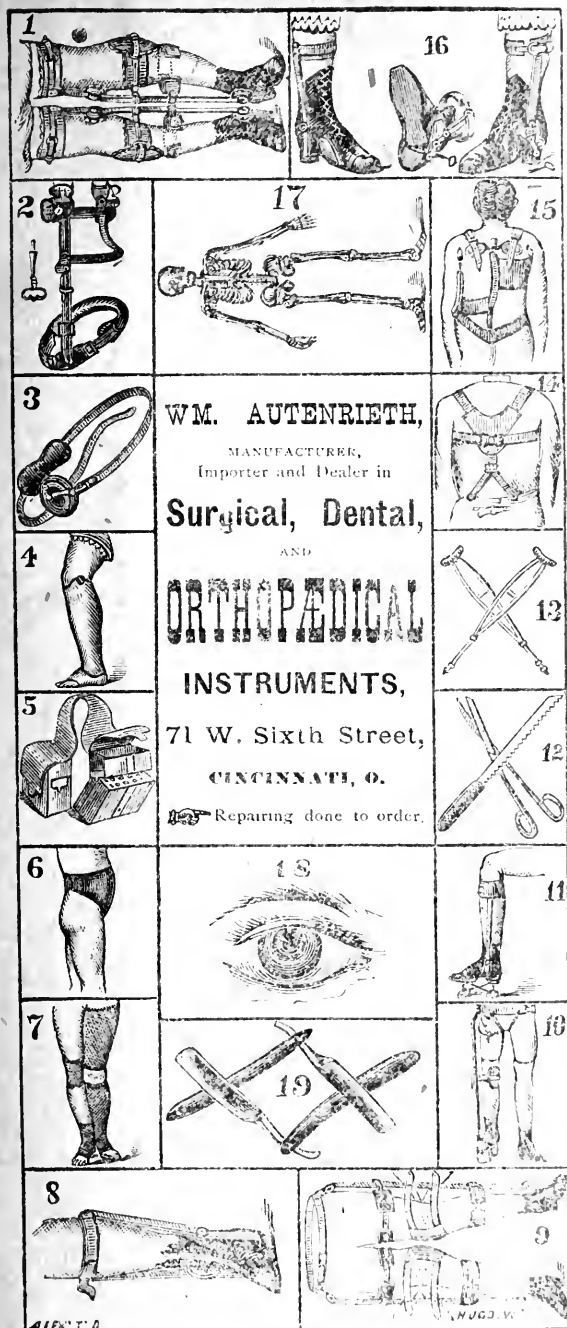
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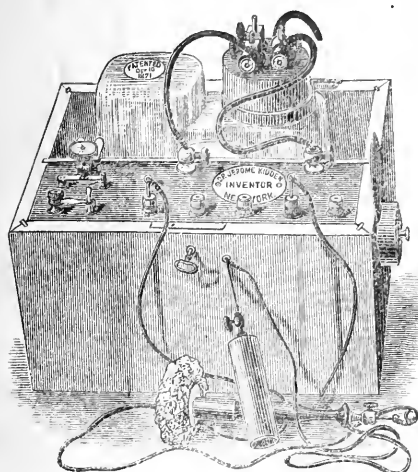
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Professor of Chemistry and Toxicology, Rush Medical College, Chicago.

CHEMICAL LABORATORY OF RUSH MEDICAL COLLEGE, }
CHICAGO, November 18, 1879. }

In order to test the comparative merits of Maltine and the various extracts of malt in the market, I purchased from different druggists samples of Maltine and of the most frequently prescribed extracts of malt, and have subjected them to chemical analysis.

As the result of these examinations, I find that Maltine contains from half as much again to three times the quantity of phosphates (nerve and brain food and bone producers), and from three to fourteen times as much diastase and other albuminoids (digestive agents and muscle producers), as any of the extracts of malt examined. Since the value of such preparations is indicated very exactly by the proportion of these—their two most important constituents, I have no hesitation in pronouncing Maltine greatly superior to any extract of malt which I examined.

The large amounts of phosphates and albuminoids found in Maltine demonstrate, moreover, the superior skill and care employed in its preparation, and thoroughly warrants the confidence placed in it by the medical profession.

Very respectfully,

WALTER S. HAINES.

PROFESSIONAL OPINIONS OF MALTINE.

During the past year we have received nearly one thousand letters from the Medical Profession in this country and Great Britain, referring to the therapeutic value of Maltine: their character is indicated by the several extracts which we present below.

ST. LOUIS, Mo., June 1, 1879.

As regards the use of Maltine I can only say I am charmed with it, and would not know how to replace it in my practice. I suppose no one in the West uses it more extensively than I do. The results I have obtained have been more satisfactory than I can possibly express. I have never met with a preparation to which I am more indebted.

J. K. BAUDUY, M. D.,

Professor Nervous and Mental Diseases, Missouri Medical College.

CINCINNATI, O., December 29, 1879.

I have used Maltine largely in the clinic of the college and in private practice, and find it exceedingly efficient as a medicine and much superior to anything of the kind with which I am acquainted.

GEO. E. WALTON, M. D.,

Professor Principles and Practice of Medicine, Cincinnati College Medicine and Surgery.

RICHMOND, VA., January 16, 1880.

I have found your Maltine preparations so valuable that I use some of them almost daily in my practice.

HUNTER MCGUIRE, M. D.,

Professor of Surgery, Medical College of Virginia.

CHICAGO, January 21, 1880.

I am very much pleased with Maltine, and since its introduction here I have entirely given up the use of extract of malt.

E. F. INGALLS, A. M., M. D.

KENSINGTON DISPENSARY, LONDON, November 24, 1879.

We are using your Maltine among our patients, and find great benefit from it, especially in cases of phthisis.

DR. CHIPPENDALE,

Resident Medical Officer.

THE BEECHES, NORTHWOLD, ENG., July 28, 1879.

I find that my patients can readily digest your Maltine with Cod Liver Oil without causing any unpleasant after-feeling. I have full confidence in the virtue it possesses to sustain the system during prolonged diseases of a tubercular or atrophic nature.

FREDERICK JOY, L. R. C. P., M. R. C. S.

123 LANSDOWNE ROAD, NOTTING HILL, }

W. LONDON, October 16, 1879. }

I have much pleasure in bearing favorable testimony to the merits of your Maltine preparations. I have used Maltine with Cod Liver Oil with the happiest results in a case of tuberculosis attended with tubercular peritonitis, in which the temperature of the patient rose to 105 1-5 degrees, and persistently remained above 100 degrees for upwards of two months. The only medicine taken was Maltine with Cod Liver Oil, and an occasional dose of carbonate of bismuth to check diarrhea. She gradually improved, and made a perfect recovery. I find Maltine with Cod Liver Oil is more readily taken and more easily assimilated than Cod Liver Oil in any other form.

EDMUND NASH, M. D.

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MALTINE—Plain.

MALTINE with Alteratives.

MALTINE with Beef and Iron.

MALTINE with Cod Liver Oil and Pancreatine.

MALTINE with Cod Liver Oil and Phosphates.

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MALTINE with Pepsin and Pancreatine.

MALTINE with Phosphates.

MALTINE with Phos. Iron, Quinia and Strychnia.

MALTINE Ferrated.

MALTINE WINE.

MALTINE WINE with Pepsin and Pancreatine.

MALTO-YERBINE.

MALTINE is now in the hands of the wholesale trade throughout the United States.

We guarantee that MALTINE will keep perfectly in any climate, or any season of the year. Faithfully yours,

REED & CARNRICK, NEW YORK.

CHEMICAL REPORTS ON MALTINE.

BY R. OGDEN DOREMUS, M. D., LL.D.

Professor of Chemistry and Toxicology, Bellevue Hospital Medical College;
Professor of Chemistry and Physics, College of the City of New York.

NEW YORK, April 17th, 1879.

I have visited the works at Creskill, on the Hudson, where MALTINE is prepared, and spent portions of two days in witnessing the chemical processes for making the same. I was particularly impressed with the thorough cleanliness observed, as well as with the completeness of the apparatus employed for accomplishing the desired result—from the first treatment of the grains, to the concentration of the liquid product by evaporation in vacuo. The operation is effective in extracting the whole of the nutritive constituents of the grains of malted Barley, Wheat and Oats, with but a slight residue, and is the most complete method yet devised, with which I am acquainted, for accomplishing this object.

MALTINE is superior in therapeutic and nutritive value to any Extract of Malt made from Barley alone, or to any other preparation of any one variety of grain. From a chemical and medical standpoint, I can not commend too highly to my professional brethren this unique and compact variety of vegetable diet and remedial agent, nutritive to every tissue of the body, from bone to brain.

Respectfully,

R. OGDEN DOREMUS.

BY PROF. JOHN ATTFIELD, F.C.S.

Professor of Practical Chemistry to the Pharmaceutical Society of Great Britain;
Author of a Manual of General Medical and Pharmaceutical Chemistry.

LONDON, 17 BLOOMSBURY SQUARE, W. C. }
October 28th, 1878. }

To Messrs. Reed & Carnrick :

GENTLEMEN:—I have analyzed the extract of malted Wheat, malted Oats and malted Barley, which you term MALTINE. I have also prepared, myself, some extract from these three malted cereals, and have similarly analyzed it, and may state at once that it corresponds in every respect with the Maltine made by myself. As regards the various Malt Extracts in the market, I may remark that your MALTINE belongs to the non-alcoholic class, and is far richer, not only in the directly nutritious material, but in the farina digesting Diastase. In comparison your MALTINE is about ten times as valuable, as a flesh former; from five to ten times as valuable, as a heat producer; and at least five times as valuable, as a starch digesting agent. It contains, unimpaired and in a highly concentrated form, the whole of the valuable materials which it is possible to extract from either malted Wheat, malted Oats or malted Barley.

Yours faithfully,

JOHN ATTFIELD.

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Much attention has been given to this subject in Europe and India.

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CINCHO-QUININE

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In addition to its superior efficacy as a tonic and anti-periodic, it has the following advantages, which greatly increase its value to physicians: —

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4th, It meets indications not met by that Salt.

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Professor of Chemistry and Mineralogy."

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"I hereby certify that I have made a chemical examination of the contents of a bottle of CINCHO-QUININE; and by direction I made a qualitative ex-

amination for quinine, quinine, and cinchonine, and hereby certify that I found these alkaloids in CINCHO-QUININE."

C. GILBERT WHEELER,

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"I have made a careful analysis of the contents of a bottle of your CINCHO-QUININE, and find it to contain quinine, quinine, cinchonine, and cinchonidine."

S. P. SHARPLES, State Assayer of Mass."

TESTIMONIALS.

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"I have used CINCHO-QUININE, and can say without any hesitation it has proved superior to the sulphate of quinine."

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This combination is a perfect preparation of pure Norwegian Cod Liver Oil, and Phospho-Nutritine, as found in White Wheat, retaining all the remedial and nutritive principles of each, compounded in accordance with scientific principles, under our direct supervision. The Medical Profession, as far as we have been able to reach, have unhesitatingly preferred PHILLIPS' "PALATABLE" for these reasons:

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